United States Department of Agriculture

NRCS

Natural Resources Conservation Service

In cooperation with the U.S. Forest Service, the Mississippi Agricultural and Forestry Experiment Station, and the Stone County Soil and Water Conservation District

Soil Survey of Stone County, Mississippi

How To Use This Soil Survey

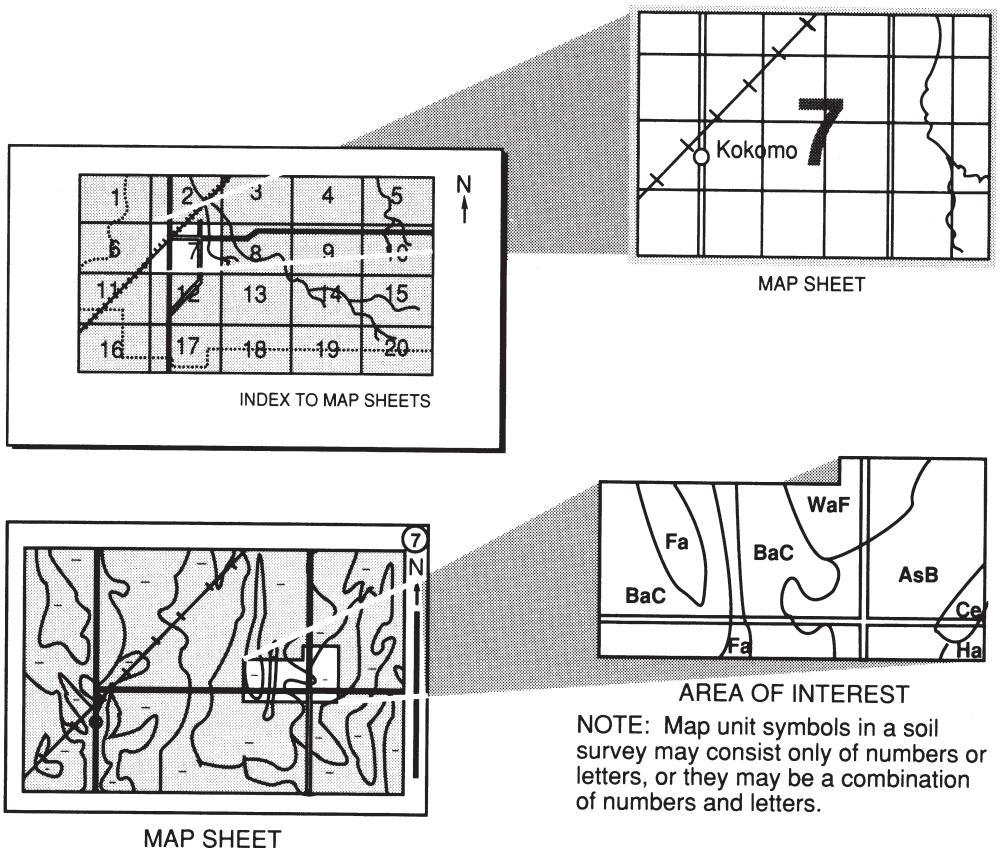
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1985. Soil names and descriptions were approved in 1986. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1985. This survey was made cooperatively by the Natural Resources Conservation Service, the United States Forest Service, and the Mississippi Agricultural and Forestry Experiment Station. The survey is part of the technical assistance furnished to the Stone County Soil and Water Conservation District.

Cover: A nursery in an area of Saucier-Susquehanna association, 2 to 8 percent slopes.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

Issued 2008

Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Homer L. Wilkes
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Stone County, Mississippi

By Rex E. Davis, Natural Resources Conservation Service

Fieldwork by Rex E. Davis, Charlie E. Breland, and Margaret Rice,
Natural Resources Conservation Service, and
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United States Department of Agriculture,
Natural Resources Conservation Service,
in cooperation with
the U.S. Forest Service,
the Mississippi Agricultural and Forestry Experiment Station, and
the Stone County Soil and Water Conservation District

STONE COUNTY is in the southeastern part of Mississippi (fig. 1). The county has an area of about 448 square miles, or 286,700 acres. Included in this figure are lakes smaller than 40 acres in size and streams smaller than one-eighth mile in width. In 1998, the population of the county was 10,750. Wiggins, the county seat, had a population of 3,185. Wiggins is in the north-central part of the county.

The county is about 27 miles from west to east and 16 miles from north to south. It is bordered by Forrest and Perry Counties to the north, George and Jackson Counties to the east, Harrison County to the south, and Pearl River County to the west.

Stone County is drained by six main stream systems. Black Creek and its tributaries, which drain the northeastern part of the county, flow eastward into George County and into the Pascagoula River. Red Creek and its tributaries drain over half the county, including the northern, central, and eastern areas. Red Creek also flows eastward into George County and into the Pascagoula River. The southwestern part of the county drains into Wolf River and then eventually into St. Louis Bay. The southern parts of the county drain into the Little Biloxi River, Biloxi River, and Tchoutacabouffa River and their tributaries and then eventually into the Back Bay of Biloxi.

About one-tenth of the land area of the county consists of flood plains along the creeks and streams. About nine-tenths consists of uplands that have a dendritic drainage pattern. The upland ridges are nearly level to sloping, and the hillsides are mainly strongly sloping to steep.

About 85 percent of the county is commercial forestland. Of the 17 industries in the county, 14 are related to timber. Production of beef cattle is the largest farm-related economic enterprise in the county. The poultry industry is the second largest.

The most important crops in the county are specialty crops, such as blueberries, cabbage, peanuts, pecans, squash, and watermelons. A small acreage of corn, cotton, grain sorghum, soybeans, and wheat is grown.

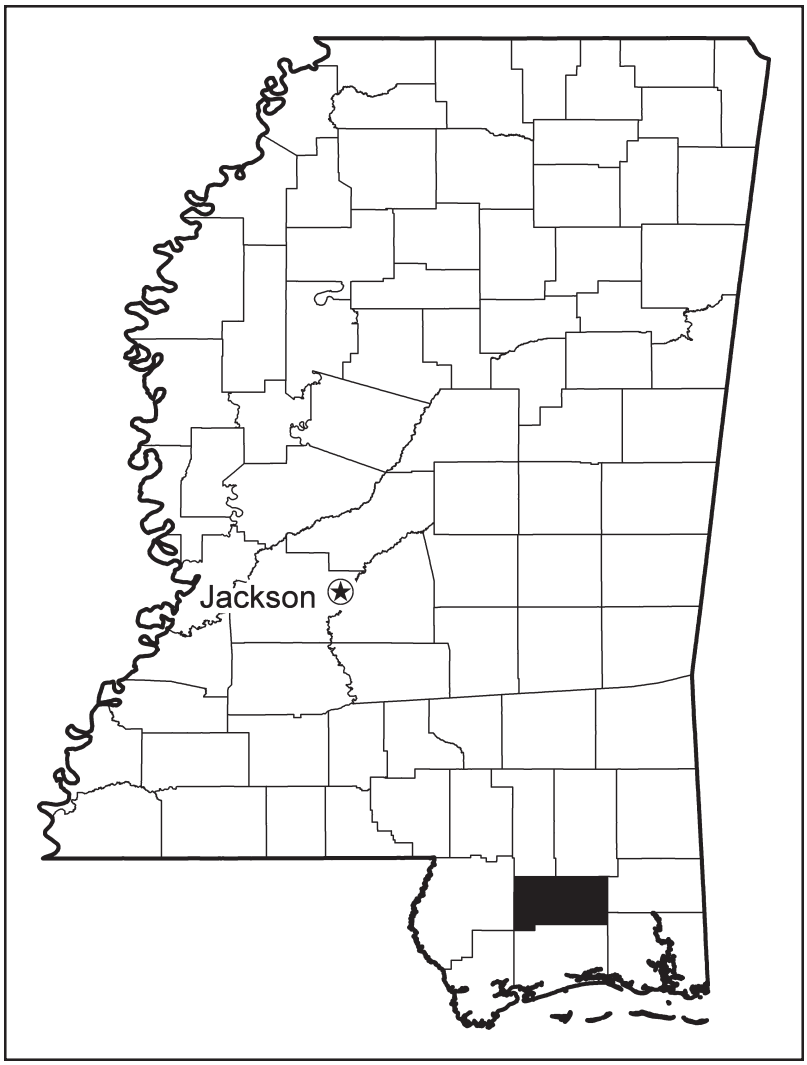

Figure 1.—Location of Stone County in Mississippi.

General Nature of the Survey Area

In this section, the agriculture, history and development, mineral resources, water resources, and climate of Stone County are described.

Agriculture

The first settlers arrived in Stone County early in 1830. Until the turn of the century, however, the county supported very little agriculture, no industry, and very few inhabitants. The railroad was completed about this time, and many sawmills were constructed to cut the virgin pine timber. By 1930, the virgin timber had been cut, the lands were denuded, and only a small portion of the land had been brought into cultivation.

Since 1930, a small percentage of the denuded forestlands has been cleared for farming. About 15 percent of the land is used for row crops, pastures, and orchards.

In 1998, income derived from forestry was $11,000,000. There were also 11,500 head of beef cattle worth $3,000,000; 4 poultry farms that produced $1,750,000; 1 hog farm; 4 wholesale nursery operations; and over 30 acres used for aquaculture.

History and Development

The area that is now Stone County was ceded to the United States by the Choctaw Indian Nation in 1805 through the Treaty of Mount Dexter. The towns of McHenry, Perkinston, Bond, and Wiggins were established in the late 1800s and grew up around early sawmills. Wiggins, which later become the county seat, was incorporated in 1904. The first town census, which was taken in 1910, counted 980 residents. Stone County was established in 1916 from lands in northern Harrison County and was named in honor of John M. Stone, a former governor of Mississippi.

Mineral Resources

The only mineral resources that have been developed in the county are oil, sand, and gravel. Large gravel pits near McHenry and Perkinston produce tremendous amounts of sand, rocks, clay gravel, pea gravel, and topsoil. Known deposits are estimated to contain in excess of 5 million cubic yards of sand and gravel. There is one operating oil well in Stone County.

Water Resources

By Professor Robert L. Bowen, Ph.D., Department of Geology, University of Southern Mississippi

Groundwater Hydrology.—Shallow wells in Stone County mostly draw water from the Citronelle Formation. Deeper wells (those over 100 feet) largely draw water from sandy lenses in the Hattiesbrurg-Pascogoula Formation or from the Catohoula Formation, which lies beneath the Hattiesburg-Pascogoula Formation. The contact between these formations has not been defined in subsurface studies. The thicknesses of the formations are therefore uncertain. Thick sand beds that hold good water are common in the Catohoula Formation.

Surface Water.—The major drainage basins within the county are the Pascagoula River Basin, Biloxi River Basin, Wolf River Basin, and Tchoutacabouffa River Basin. A sufficient quantity of surface water having suitable quality for most industrial and agricultural uses is available from many of the streams that cross the county. These stream systems represent a large untapped water resource. Because of seasonal variations in flow, however, the supply from streams is not dependable year-round in some places. Black Creek, a wide meandering stream that has broad sandbars and that is in the Desoto National Forest, is used for float trips, camping, and fishing.

Runoff from precipitation and ground-water discharge is a source of flow in streams and rivers. Streams running through the county have comparable mean annual flows and runoff proportionate to the size of the drainage basin. Maximum annual flows are about twice the mean annual flows for the periods of record. Physical variations, such as topography, account for the differences in maximum and minimum instantaneous flows between the basins.

Numerous ponds have been constructed on farms throughout the county. These ponds supply water for livestock, recreational uses, fish, and wildlife. A large impoundment behind a flood control structure in Flint Creek Water Park, near Wiggins, is used for many kinds of recreation, including fishing, boating, skiing, and swimming. Other large impoundments are Happy Lakes, Silver Run Lake, Toc-O-Leen, Red Gap Lakes, Lake A-Way, and Airey Lake.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Wiggins, Mississippi, in the period 1961 to 1987. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 50.3 degrees F and the average daily minimum temperature is 37.8 degrees. The lowest temperature on record, which occurred on January 21, 1985, is 1 degree. In summer, the average temperature is 80.4 degrees and the average daily maximum temperature is 91.8 degrees. The highest recorded temperature, which occurred on June 29, 1969, is 105 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 62.2 inches. Of this, 33.2 inches, or 53 percent, usually falls in April through October. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through October is less than 15.5 inches. The heaviest 1-day rainfall during the period of record was 9.3 inches on November 22, 1948. Thunderstorms occur on about 69 days each year and are most common in July.

The average seasonal snowfall is about 0.5 inch. The greatest snow depth at any one time during the period of record was 13 inches on January 1, 1964. Typically, 0 days of the year have at least 1 inch of snow on the ground.

The average relative humidity in midafternoon is about 63 percent. Humidity is higher at night, and the average at dawn is about 87 percent. The sun shines 63 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the southwest. Average windspeed is highest, 9.9 miles per hour, in February and March.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of

rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis

of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Malbis fine sandy loam, 2 to 5 percent slopes, is a phase of the Malbis series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Jena-Nugent complex, frequently flooded, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Saucier-Susquehanna association, 2 to 8 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Johnston and Croatan soils, frequently flooded, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. The Pits part of the Pits-Udorthents complex is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

1—Annemaine loam, occasionally flooded

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Shape of areas: Oblong
Size of areas: 10 to 60 acres

Composition

Annemaine and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsurface layer:
5 to 11 inches—brown loam

Subsoil:
11 to 30 inches—yellowish red clay loam

30 to 38 inches—yellowish red clay loam that has red, pale brown, and light gray mottles
38 to 47 inches—yellowish red and red clay loam that has brownish and grayish mottles

Substratum:
47 to 60 inches—mottled red, light yellowish brown, and gray sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1 1/2 to 2 1/2 feet from December through April
Shrink-swell potential: Moderate
Flooding: Occasional for very brief or brief periods from January through March
Degree of erosion: Slight
Slope class: Nearly level
Tilth: Good
Parent material: Stratified clayey and loamy sediments

Minor Components

Dissimilar soils:
- Well drained, loamy Jena soils on narrow flood plains
- Well drained Latonia soils, which are in the slightly higher, more convex positions
- Loamy Harleston soils in the slightly higher positions
- Sandy Nugent soils on narrow flood plains
- Very poorly drained Johnston soils in poorly defined drainageways

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Moderately suited
Management concerns: Wetness and flooding
Management measures and considerations:
- Proper arrangement of rows helps to remove excess surface water from low lying areas.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Harvesting row crops as soon as possible reduces the risk of damage from the flooding.

Pasture and hayland
Suitability: Well suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- Productivity can be maintained or improved by renovating pastures as needed, using proper application rates for lime and fertilizer, and seeding with proper mixtures.
- Harvesting hay crops as soon as possible reduces the risk of damage from the flooding.

Forestland
Suitability: Well suited
Management concerns: Flooding, equipment use, and competition from undesirable plants
Management measures and considerations:
- Harvesting timber during the summer reduces the risk of damage from the flooding.
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Restricting logging to periods when the soil is not saturated minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- A site that has better suited soils at a higher elevation should be selected.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Flooding, wetness, and restricted permeability
Management measures and considerations:
- The local Health Department can be contacted for guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited (ASTM, 2001)
Management concerns: Low strength and flooding
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope help to overcome the low strength of the natural soil material.
- Well-compacted fill material can be used as a road base to help elevate roads above the flooding.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Wetness and flooding
Management measures and considerations:
- A surface or subsurface drainage system may be needed.
- This map unit is difficult to manage because of the flooding, which severely limits use during periods of inundation.

Interpretive Groups

Land capability classification: 2w
Forestland ordination symbol: 9W for loblolly pine

2—Atmore loam

Setting

Landscape: Coastal Plain
Landform: Stream divides
Landform position: Flats to concave depressions
Slope: 0 to 2 percent
Shape of areas: Oblong
Size of areas: 5 to 100 acres

Composition

Atmore and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark gray loam

Subsurface layer:
5 to 12 inches—dark grayish brown loam
12 to 22 inches—light brownish gray loam that has mottles in shades of brown and red

Subsoil:
22 to 38 inches—gray silt loam that has mottles in shades of brown and red
38 to 50 inches—light brownish gray silt loam that has mottles in shades of red and yellow
50 to 60 inches—light gray silty clay loam that has mottles in shades of red and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at the surface to a depth of 1 foot from October through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Slight
Tilth: Fair
Slope class: Nearly level
Reaction: Extremely acid to strongly acid throughout, except where lime has been applied to the surface layer
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia and moderately well drained Saucier soils in the slightly higher, convex positions
- Moderately well drained Poarch soils in the higher, more convex positions

Similar soils:
- Smithton soils on narrow flood plains

Land Use

Dominant uses: Forestland

Cropland
Suitability: Suited
Management concerns: Wetness, soil fertility, and competition from undesirable plants
Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping increases productivity.
- In undrained areas, planting wetness-tolerant species increases productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Poorly suited
Management concerns: Seedling survival, wetness, competition from undesirable plants, and low fertility
Management measures and considerations:
- Site conditions are not suited to supporting a successful timber management program.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—suited; wetland wildlife—well suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- A site that has better suited soils should be selected.

Local roads and streets
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Constructing roads on raised, well-compacted fill material helps to overcome the wetness.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• A surface or subsurface drainage system may be needed.

Interpretive Groups

Land capability classification: 4w
Forestland ordination symbol: 8W for loblolly pine

3—Benndale fine sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands and high terraces
Landform position: Slightly convex slopes
Shape of areas: Either long and narrow or irregular
Size of areas: 10 to 300 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 11 inches—brown sandy loam

Subsoil:
11 to 22 inches—strong brown loam
22 to 42 inches—yellowish brown loam that has red mottles in the lower part
42 to 62 inches—yellowish brown sandy loam that has brownish yellow, light yellowish brown, and red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Good
Slope class: Gently sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
• Somewhat poorly drained Escambia soils in the slightly lower positions

Similar soils:
• Loamy Latonia soils, which are in the lower positions on marine and stream terraces

- Moderately well drained Malbis and Poarch soils, which contain 5 percent or more plinthite segregations in the subsoil
- Loamy McLaurin soils, which are in the higher landscape positions, have a Bt horizon with hue of 5YR or redder, and are bisequal
- Loamy Smithdale soils, which are in landscape positions similar to those of the Benndale soil, have a Bt horizon with hue of 5YR or redder, and are not bisequal

Land Use

Dominant uses: Cropland, pasture, and forestland

Cropland
Suitability: Well suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland (fig. 2)
Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Figure 2.—A well established stand of annual cool-season grass used for livestock grazing in an area of Benndale fine sandy loam, 2 to 5 percent slopes.

- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: Seasonal wetness
Management measures and considerations:
- Additional distribution line may be needed to overcome the wetness.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: Low strength
Management measures and considerations:
- The low strength of the natural soil material can be overcome by removing the existing material and filling with suitable construction material that has stronger bearing strength.

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility and droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.

Interpretive Groups

Land capability classification: 2e (USDA–SCS, 1961)
Forestland ordination symbol: 10A for loblolly pine

4—Benndale fine sandy loam, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands and high terraces
Landform position: Slightly convex slopes
Shape of areas: Long and narrow on ridgetops and irregular on hillsides
Size of areas: 5 to 160 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—dark brown fine sandy loam

Subsurface layer:
3 to 9 inches—light yellowish brown fine sandy loam

Subsoil:
9 to 30 inches—yellowish brown sandy loam
30 to 58 inches—strong brown sandy loam
58 to 62 inches—yellowish brown sandy loam that has mottles in shades of yellow and brown

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Severe
Tilth: Friable
Natural fertility: Low
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied to the surface layer
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils on uplands
- Poorly drained Smithton soils in the lower parts of the mapped areas, next to drains
- Excessively drained Eustis soils in positions similar to those of the Benndale soil

Similar soils:
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Moderately well drained McLaurin and Poarch soils, which contain 5 percent or more plinthite segregations at some depth
- Loamy McLaurin soils, which are in the higher landscape positions, have a subsoil horizon with hue of 5YR or redder, and are bisequal
- Loamy Smithdale soils, which are in landscape positions similar to those of the Benndale soil, have a subsoil horizon with hue of 5YR or redder, and are not bisequal

Land Use

Dominant uses: Cropland, pasture, and forestland

Cropland
Suitability: Suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: None

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited
Management concerns: Seasonal wetness
Management measures and considerations:
- The site should be carefully evaluated to ensure proper placement of distribution lines.

Local roads and streets
Suitability: Well suited
Management concerns: Low strength
Management measures and considerations:
- The low strength of the natural soil material can be overcome by removing the existing material and filling with suitable construction material that has stronger bearing strength.

Lawns and landscaping
Suitability: Well suited
Management concerns: Low natural fertility

Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 10A for loblolly pine

5—Benndale fine sandy loam, rolling

Setting

Landscape: Coastal Plain
Landform: Upland hillslopes and high terraces
Landform position: Slightly convex slopes
Slope: 8 to 12 percent
Shape of areas: Irregular
Size of areas: 5 to 80 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown fine sandy loam

Subsurface layer:
4 to 10 inches—brown fine sandy loam

Subsoil:
10 to 22 inches—brownish yellow sandy loam
22 to 40 inches—brownish yellow sandy loam that has light yellowish brown mottles
40 to 54 inches—yellowish brown sandy loam that has strong brown, brownish yellow, and red mottles
54 to 62 inches—yellowish brown sandy loam that has strong brown, pale brown, and red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Friable
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils on uplands
- Lucy soils, which are on the lower hillslopes and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Moderately well drained Malbis and Poarch soils, which contain 5 percent or more plinthite segregations in the subsoil
- Loamy McLaurin soils, which are in the higher landscape positions, have a subsoil horizon with hue of 5YR or redder, and are bisequal
- Loamy Smithdale soils, which are in landscape positions similar to those of the Benndale soil, have a subsoil horizon with hue of 5YR or redder, and are not bisequal

Land Use

Dominant uses: Forestland

Cropland
Suitability: Unsuited
Management concerns: Erodibility due to steepness of slope
Management measures and considerations:
- A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Suited
Management concerns: Erodibility due to steepness of slope; equipment use; soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Fencing livestock away from creeks and streams helps to control erosion of the streambanks and sedimentation of the creeks and streams.
- The slope may limit equipment use in the steeper areas when hay crops are harvested.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: None

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited

Management concerns: Slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.

Local roads and streets
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Designing roads to conform to the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases the rate of water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep soil on the site.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 4e
Forestland ordination symbol: 10A for loblolly pine

6—Benndale fine sandy loam, undulating

Setting

Landscape: Coastal Plain
Landform: Upland ridges
Landform position: Slightly convex slopes
Slope: 2 to 8 percent
Shape of areas: Elongated
Size of areas: 5 to 200 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark grayish brown fine sandy loam

Subsurface layer:
5 to 11 inches—brown fine sandy loam

Subsoil:
11 to 20 inches—yellowish brown sandy loam
20 to 35 inches—brownish yellow sandy loam
35 to 42 inches—mottled light yellowish brown and strong brown sandy loam
42 to 60 inches—light yellowish brown sandy loam that has light gray and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Good
Slope class: Gently sloping or moderately sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:

- Somewhat excessively drained Eustis soils, which are in landscape positions similar to those of the Benndale soil but are sandier
- Lucy soils, which are on the lower hillslopes and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:

- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Moderately well drained Malbis and Poarch soils, which contain 5 percent or more plinthite segregations at some depth
- Loamy McLaurin soils, which are in the higher landscape positions, have a subsoil horizon with hue of 5YR or redder, and are bisequal
- Loamy Smithdale soils, which are in landscape positions similar to those of the Benndale soil, have a subsoil horizon with hue of 5YR or redder, and are not bisequal

Land Use

Dominant uses: Forestland and wildlife habitat

Cropland
Suitability: Suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:

- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity (Soil Survey Division Staff, 1993).

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:

- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: Erodibility and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Establishing a permanent plant cover on roads and landings after logging and reforesting immediately after harvest using minimal site preparation and recommended tree species help to control erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: None

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 10A for loblolly pine

7—Escambia fine sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Broad, upland flats
Landform position: Planar to slightly convex
Shape of areas: Irregular
Size of areas: 5 to 40 acres

Composition

Escambia and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—very dark gray fine sandy loam

Subsurface layer:
4 to 8 inches—brown fine sandy loam that has dark grayish brown mottles

Subsoil:
8 to 17 inches—yellowish brown loam that has mottles in shades of brown
17 to 23 inches—light yellowish brown loam that has mottles in shades of brown and gray
23 to 44 inches—light brownish gray loam that has mottles in shades of gray and brown
44 to 58 inches—strong brown fine sandy loam that has mottles in shades of yellow and gray
58 to 62 inches—strong brown and light yellowish brown loam that has mottles in shades of red and gray

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 1 1/2 to 2 1/2 feet from December through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: None or slight
Tilth: Good
Slope class: Nearly level
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Moderately well drained Harleston and Malbis soils in the slightly higher, more convex positions
- Moderately well drained Saucier soils, which are in the higher landscape positions, have mottles of chroma 2 or less within a depth of 30 inches, and are clayey in the lower part of the subsoil
- Poorly drained Smithton soils, which are in narrow drainageways

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Well suited
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Using open ditches and diversions increases productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- In undrained areas, planting wetness-tolerant species increases productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Wetness and soil fertility

Management measures and considerations:
- Using rotational grazing, implementing a well planned schedule of clipping and harvesting, and removing livestock in time to allow forage plants to recover before winter dormancy help to maintain the pasture and increase productivity.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and the damage caused to tree roots by compaction.
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwelling on raised, well-compacted fill material reduces the risk of damage from wetness.
- Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of $1^1/_2$ to $2^1/_2$ feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing roads on raised, well-compacted fill material helps to overcome the wetness.
- Designing roads to safely remove surface runoff improves soil performance.

Lawns and landscaping
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- A surface or subsurface drainage system may be needed.
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2w
Forestland ordination symbol: 9W for loblolly pine

8—Escambia fine sandy loam, undulating

Setting

Landscape: Coastal Plain
Landform: Broad, upland flats
Landform position: Flat to slightly concave slopes
Slope: 0 to 5 percent
Shape of areas: Irregular
Size of areas: 5 to 80 acres

Composition

Escambia and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—dark gray fine sandy loam

Subsurface layer:
3 to 5 inches—brown fine sandy loam

Subsoil:
5 to 24 inches—light yellowish brown fine sandy loam that has dark yellowish brown mottles
24 to 29 inches—mottled brownish yellow and gray fine sandy loam
29 to 36 inches—mottled light yellowish brown, light gray, and yellowish red fine sandy loam
36 to 60 inches—mottled light yellowish brown, light gray, and yellowish red fine sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 1 1/2 to 2 1/2 feet from December through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Good

Slope class: Nearly level to gently sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Well drained Benndale soils in the slightly higher, more convex positions
- Moderately well drained Malbis and Poarch soils in the slightly higher positions
- Poorly drained Smithton soils in narrow drainageways

Land Use

Dominant uses: Forestland and wildlife habitat

Cropland
Suitability: Well suited
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Using open ditches and diversions increases productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- In undrained areas, planting wetness-tolerant species increases productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Using rotational grazing, implementing a well planned schedule of clipping and harvesting, and removing livestock in time to allow forage plants to recover before winter dormancy help to maintain the pasture and increase productivity.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and the damage caused to tree roots by compaction.
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwelling on raised, well-compacted fill material reduces the risk of damage from wetness.

- Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of 1 1/2 to 2 1/2 feet.
- Using suitable fill material to raise the filter field a significant distance above the seasonal high water table improves system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing roads on raised, well-compacted fill material helps to overcome the wetness.
- Designing roads to safely remove surface runoff improves soil performance.

Lawns and landscaping
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- A surface or subsurface drainage system may be needed.
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2e
Forestland ordination symbol: 9W for loblolly pine

9—Eustis loamy sand, 12 to 17 percent slopes

Setting

Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Convex slopes
Shape of areas: Irregular
Size of areas: 5 to 180 acres

Composition

Eustis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark gray loamy sand

Subsurface layer:
5 to 14 inches—dark grayish brown loamy fine sand

Subsoil:
14 to 32 inches—strong brown loamy fine sand
32 to 42 inches—light yellowish brown loamy fine sand that has brown mottles
42 to 62 inches—pale brown loamy fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Low
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Severe
Tilth: Fair
Slope class: Strongly sloping or moderately steep
Parent material: Sandy sediments

Minor Components

Dissimilar soils:
- Well drained Ruston and McLaurin soils, which are on upland ridgetops and have a bisequum

Similar soils:
- Sandy Troup soils, which are on the lower hillslopes

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Unsuited
Management concerns: Erodibility, equipment use, and droughtiness
Management measures and considerations:
- This map unit is severely limited for crop production. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Poorly suited
Management concerns: Erodibility, soil fertility, and droughtiness
Management measures and considerations:
- Fencing livestock away from creeks and streams helps to control erosion of the streambanks and sedimentation of the creeks and streams.
- Using drought-tolerant plants increases productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using equipment that has low-pressure tires increases traction and minimizes the rutting caused by the high content of sand in the soil.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Suited
Management concerns: Erodibility, equipment use, and seedling survival
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

- Establishing a permanent plant cover on roads and landings after logging and reforesting immediately after harvest using minimal site preparation and recommended tree species help to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
- Leaving a buffer zone of trees and shrubs adjacent to streams helps to control siltation and provides shade for the surface of the water, thereby improving aquatic habitat.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by selecting and planting suitable drought-resistant species.

Dwellings without basements
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Designing structures to conform to the natural slope or building in the less sloping areas helps to overcome the slope limitation.
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Designing roads to conform to the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Vegetating cut-and-fill slopes as soon as possible after construction helps to stabilize the soil and prevents excessive erosion.

Lawns and landscaping
Suitability: Suited
Management concerns: Slope and droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases the rate of water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep soil on the site.
- Applying supplemental irrigation and seeding or planting varieties adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 7s
Forestland ordination symbol: 8R for loblolly pine

10—Eustis loamy sand, undulating

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Summits, shoulders, and backslopes
Slope: 0 to 8 percent
Shape of areas: Irregular
Size of areas: 5 to 80 acres

Composition

Eustis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—very dark grayish brown loamy sand

Subsurface layer:
3 to 8 inches—brown loamy sand

Subsoil:
8 to 22 inches—strong brown loamy sand
22 to 26 inches—strong brown loamy sand that has yellowish red mottles
26 to 60 inches—yellowish red loamy sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Low
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Fair
Slope class: Nearly level to moderately sloping
Parent material: Sandy sediments

Minor Components

Dissimilar soils:
- Well drained, loamy Lucedale, McLaurin, and Ruston soils in the slightly higher positions

Similar soils:
- Sandy Troup soils, which are on the lower hillslopes

Land Use

Dominant uses: Forestland and wildlife habitat

Cropland
Suitability: Poorly suited

Management concerns: Erodibility, equipment use, and droughtiness
Management measures and considerations:
- This map unit is severely limited for crop production. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, equipment use, droughtiness, and nutrient leaching
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- The slope can limit equipment use in the steeper areas when hay is harvested.
- Using drought-tolerant plants increases productivity.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Suited
Management concerns: Equipment use and seedling survival
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Using equipment that has wide tires or crawler-type equipment and harvesting trees when the soil is moist improves trafficability.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by selecting and planting suitable drought-resistant species.

Dwellings
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited
Management concerns: Slope and poor filtering capacity
Management measures and considerations:
- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding onsite sewage disposal.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation increase the rate of water infiltration.
- Applying supplemental irrigation and seeding or planting varieties adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3s
Forestland ordination symbol: 8S for loblolly pine

11—Harleston fine sandy loam, occasionally flooded

Setting

Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Shape of areas: Elongated
Size of areas: 5 to 300 acres

Composition

Harleston and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark grayish brown fine sandy loam

Subsurface layer:
5 to 11 inches—brown sandy loam

Subsoil:
11 to 25 inches—light yellowish brown loam
25 to 35 inches—light olive brown loam that has mottles in shades of gray and brown
35 to 44 inches—light olive brown loam that has mottles in shades of gray and brown
44 to 52 inches—mottled light yellowish brown, light olive brown, yellowish brown, and light brownish gray sandy loam
52 to 62 inches—mottled light brownish gray, yellowish brown, and light yellowish brown sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 2 to 3 feet from November through April
Shrink-swell potential: Low
Flooding: Occasional for very brief periods from November through April

Degree of erosion: None or slight
Tilth: Good
Slope class: Nearly level
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Well drained Benndale soils on uplands
- Somewhat poorly drained Escambia soils on broad, upland flats
- Malbis soils in convex positions that are similar to those of the Harleston soil
- Plinthic Poarch and Saucier soils on uplands
- Poorly drained Smithton soils in narrow drainageways

Land Use

Dominant uses: Forestland, cropland, and pasture

Cropland
Suitability: Suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Although most of the flooding occurs during the winter, there is a risk of crop loss during the growing season.
- Installing a subsurface drainage system improves the productivity of moisture-sensitive crops, such as soybeans.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from the flooding.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland (fig. 3)
Suitability: Well suited
Management concerns: Plant competition
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Restricting logging to periods when the soil is not saturated minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Figure 3.—A pine plantation in an area of Harleston fine sandy loam, occasionally flooded. Selected thinning is a common practice in such areas during the dry season.

Dwellings without basements
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on elevated, well-compacted, sloping fill material helps to divert surface water away from the building and minimizes damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of 2 to 3 feet.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Well-compacted fill material can be used as a road base to help elevate roads above the flooding.
- Constructing roads on raised, well-compacted fill material also helps to overcome the wetness.

Lawns and landscaping
Suitability: Suited
Management concerns: Flooding and wetness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- A surface or subsurface drainage system may be needed.
- This map unit is difficult to manage because of the flooding, which severely limits use during periods of inundation.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2w
Forestland ordination symbol: 9W for loblolly pine

12—Jena-Nugent complex, frequently flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Jena—flat to slightly convex positions on the lower parts of natural levees; Nugent—convex positions on the higher parts of natural levees
Slope: 0 to 2 percent
Shape of areas: Long and narrow
Size of areas: 10 to more than 100 acres

Composition

Jena and similar soils: 47 percent
Nugent and similar soils: 38 percent
Dissimilar soils: 15 percent

Typical Profile

Jena
Surface layer:
0 to 3 inches—dark grayish brown loam

Subsoil:
3 to 35 inches—brown very fine sandy loam
35 to 38 inches—light yellowish brown very fine sandy loam that has brown mottles

Substratum:
38 to 60 inches—light yellowish brown loamy fine sand

Nugent
Surface layer:
0 to 5 inches—brown loamy sand

Substratum:
5 to 15 inches—brown sand that has thin strata of loamy sand
15 to 25 inches—very pale brown sand that has few thin strata of loamy fine sand
25 to 30 inches—brown loamy sand that has thin strata of fine sandy loam
30 to 51 inches—light yellowish brown loamy sand that has thin strata of fine sandy loam
51 to 62 inches—very pale brown sand that has thin strata of fine sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Jena—well drained; Nugent—excessively drained
Permeability: Jena—moderate; Nugent—moderately rapid
Available water capacity: Jena—moderate; Nugent—low
Seasonal high water table: Jena—More than 6 feet below the surface; Nugent—apparent, at a depth of $3^{1}/_{2}$ to 6 feet from January to April
Shrink-swell potential: Low
Flooding: Frequent for brief or very brief periods from December through April
Degree of erosion: Slight
Tilth: Jena—good; Nugent—fair
Slope class: Nearly level
Parent material: Jena—loamy alluvium; Nugent—sandy alluvium

Minor Components

Dissimilar soils:
- Moderately well drained, stratified clayey and loamy Annemaine soils on remnants of low terraces
- Poorly drained Smithton soils in depressions

Similar soils:
- Scattered areas of soils that are similar to the Jena soil but are moderately well drained

Land Use

Dominant uses: Forestland, pasture, and hayland

Cropland
Suitability: Poorly suited
Management concerns: Flooding, droughtiness, and nutrient leaching
Management measures and considerations:
- This map unit is difficult to manage for cropland because of the potential for flooding during the growing season.

- Applying supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using split applications increases the effectiveness of fertilizer and herbicides.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Management concerns: Flooding, droughtiness, and nutrient leaching
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Using drought-tolerant plants increases productivity.
- Using split applications increases the effectiveness of fertilizer and herbicides.

Forestland
Suitability: Suited
Management concerns: Equipment use and seedling survival
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Harvesting timber during the summer reduces the risk of damage from the flooding.

Wildlife habitat (fig. 4)
Potential of the Jena soil to support habitat for: Openland wildlife—suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Potential of the Nugent soil to support habitat for: Openland wildlife—poorly suited; forestland wildlife—poorly suited; wetland wildlife—very poorly suited

Figure 4.—An area of Jena-Nugent complex, frequently flooded, along Black Creek.

Management concerns: None
Management measures and considerations:
• Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Unsuited
Management concerns: Flooding
Management measures and considerations:
• A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding and wetness
Management measures and considerations:
• A site that has better suited soils should be selected.
• The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Unsuited
Management concerns: Flooding
Management measures and considerations:
• A site that has better suited soils should be selected.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Flooding
Management measures and considerations:
• This map unit is severely limited as a site for lawns and landscaping. A site that has better suited soils should be selected.

Interpretive Groups

Land capability classification: 5w
Forestland ordination symbol: Jena—11W; Nugent—9S

13—Johnston and Croatan soils, frequently flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Concave slopes
Slope: 0 to 2 percent
Shape of areas: Long and narrow
Size of areas: 10 to 100 acres

Composition

Johnston and similar soils: 50 percent
Croatan and similar soils: 39 percent
Dissimilar soils: 11 percent

Typical Profile

Johnston
Surface layer:
0 to 15 inches—black mucky loam

Subsurface layer:
15 to 40 inches—very dark gray mucky loam

Substratum:
40 to 55 inches—gray sandy loam
55 to 60 inches—dark gray sandy loam

Croatan
Surface layer:
0 to 7 inches—very dark grayish brown muck

Subsurface layer:
7 to 30 inches—very dark gray muck

Substratum:
30 to 40 inches—dark grayish brown sandy loam
40 to 60 inches—gray sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Johnston—moderately rapid; Croatan—moderate
Available water capacity: Johnston—high; Croatan—very high
Seasonal high water table: Johnston—apparent, from 1 foot above the surface to a depth of 1 1/2 feet from November through June; Croatan—apparent, at the surface to a depth of 1 foot from November through May
Shrink-swell potential: Low
Flooding: Johnston—frequent for brief to long periods from November through July; Croatan—frequent for long periods from November through May
Degree of erosion: None or slight
Tilth: Fair
Slope class: Nearly level
Parent material: Johnston—recent alluvium; Croatan—highly decomposed organic material underlain by loamy alluvium

Minor Components

Dissimilar soils:
- Poorly drained, mineral Smithton soils on low terraces and in broad depressions, flood plains, and drainageways
- Scattered areas of very poorly drained organic soils that are 35 to 60 inches deep to mineral material

Land Use

Dominant uses: Forestland

Cropland
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Forestland
Suitability: Suited

Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Harvesting timber during the summer reduces the risk of damage from the flooding.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poorly suited; forestland wildlife—poorly suited; wetland wildlife—well suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Poor filter, slow percolation, wetness, ponding, and flooding
- A site that has better suited soils should be selected.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Unsuited
Management concerns: Subsides, wetness, ponding, and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Acidity, wetness, ponding, and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Interpretive Groups

Land capability classification: 7w
Forestland ordination symbol: Johnston—7W; Croatan—6W

14—Latonia fine sandy loam, occasionally flooded

Setting

Landscape: Coastal Plain
Landform: Marine terraces and stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Shape of areas: Oblong
Size of areas: 5 to 40 acres

Composition

Latonia and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—brown fine sandy loam

Subsoil:
6 to 18 inches—yellowish brown sandy loam
18 to 26 inches—strong brown loam
26 to 35 inches—yellowish brown loam

Substratum:
35 to 48 inches—brownish yellow sandy loam
48 to 56 inches—brownish yellow loamy sand that has mottles in shades of brown and gray
56 to 60 inches—light yellowish brown sand that has pale brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: Occasional for very brief periods from November through April
Degree of erosion: None or slight
Tilth: Good
Slope class: Nearly level
Parent material: Marine or alluvial sediments

Minor Components

Dissimilar soils:
- Moderately well drained Annemaine soils on low stream terraces and flood plains
- Moderately well drained Harleston soils in the slightly higher landscape positions
- Poorly drained Smithton soils along stream channels

Similar soils:
- Loamy Benndale and McLaurin soils in the higher landscape positions

Land Use

Dominant uses: Forestland, cropland, and pasture

Cropland
Suitability: Well suited
Management concerns: Flooding and soil fertility
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from the flooding.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Flooding and soil fertility

Management measures and considerations:
- Harvesting hay crops as soon as possible reduces the risk of damage from the flooding.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment use
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Harvesting timber during the summer reduces the risk of damage from the flooding.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Unsuited
Management concerns: Flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding and poor filter
Management measures and considerations:
- A site that has better suited soils should be selected.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
- Well-compacted fill material can be used as a road base to help elevate roads above the flooding.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Droughtiness and flooding
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Applying supplemental irrigation and seeding or planting varieties adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
- This map unit is difficult to manage because of the flooding, which severely limits use during periods of inundation.

Interpretive Groups

Land capability classification: 2w
Forestland ordination symbol: 9A for loblolly pine

15—Lucedale loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Broad, upland flats
Landform position: Planar to slightly convex slopes
Shape of areas: Irregular
Size of areas: 5 to 100 acres

Composition

Lucedale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—dark brown loam

Subsoil:
7 to 72 inches—dark red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: None or slight
Tilth: Good
Slope class: Nearly level
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained Eustis soils in the slightly lower positions
- Poorly drained Smithton soils in depressions and drainageways

Similar soils:
- Loamy McLaurin and Ruston soils, which are in landscape positions similar to those of the Lucedale soil but have a subsoil with color values of 4 or more throughout

Land Use

Dominant uses: Cropland, pasture, and forestland

Cropland
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: None

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 1
Forestland ordination symbol: 9A for loblolly pine

16—Lucy loamy sand, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Convex slopes
Shape of areas: Irregular
Size of areas: 5 to 140 acres

Composition

Lucy and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—brown loamy sand

Subsurface layer:
7 to 22 inches—yellowish brown loamy sand

Subsoil:
22 to 28 inches—strong brown sandy loam
28 to 40 inches—yellowish red sandy loam
40 to 50 inches—yellowish red sandy loam that has yellowish brown mottles
50 to 62 inches—red sandy loam that has mottles in shades of brown and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Fair
Slope class: Gently sloping
Parent material: Sandy and loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained Eustis soils, which are on the steeper, upland hillsides and have a sandy control section
- Poorly drained Smithton soils in depressions and drainageways

Similar soils:
- Loamy McLaurin soils, which have a bisequum and are more loamy in the upper part than the Lucy soil
- Loamy Ruston soils, which have a bisequum and are more loamy throughout than the Lucy soil
- Somewhat excessively drained Troup soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 79 inches

Land Use

Dominant uses: Forestland, pastureland, and cropland

Cropland
Suitability: Suited
Management concerns: Erodibility, droughtiness, and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture and suited to hayland
Management concerns: Droughtiness and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Using drought-tolerant plants increases productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Using tracked or low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Establishing a permanent plant cover on roads and landings and reforesting immediately after harvest help to control erosion and the siltation of streams.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: None

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Applying supplemental irrigation and seeding or planting varieties adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2s
Forestland ordination symbol: 8S for loblolly pine

17—Malbis fine sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Broad, upland ridges
Landform position: Slightly convex or slightly concave slopes
Shape of areas: Irregular
Size of areas: 5 to 340 acres

Composition

Malbis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 10 inches—yellowish brown sandy loam

Subsoil:
10 to 16 inches—brownish yellow loam
16 to 28 inches—yellowish brown loam
28 to 38 inches—yellowish brown loam that has yellowish red mottles
38 to 45 inches—sandy clay loam mottled in shades of brown, red, and gray
45 to 65 inches—mottled yellowish brown, light brownish gray, and yellowish red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Seasonal high water table: Perched, at a depth of $2^{1}/_{2}$ to 4 feet from December through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Good
Slope class: Gently sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils in the slightly lower landscape positions
- Poorly drained Smithton soils in depressions and drainageways

Similar soils:
- Benndale and Poarch soils, which are in landscape positions similar to those of the Malbis soil but have coarser textures in the subsoil

Land Use

Dominant uses: Forestland, cropland, and pasture

Cropland (fig. 5)
Suitability: Well suited
Management concerns: Erodibility and soil fertility

Figure 5.—A good stand of early corn in an area of Malbis fine sandy loam, 2 to 5 percent slopes.

Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of 2$^{1}/_{2}$ to 4 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Low bearing strength
Management measures and considerations:
- Using material from another site for the roadbed can help to overcome the low bearing strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2e
Forestland ordination symbol: 9A for loblolly pine

18—Malbis fine sandy loam, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Concave and convex slopes
Shape of areas: Irregular
Size of areas: 5 to 80 acres

Composition

Malbis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—dark grayish brown fine sandy loam

Subsoil:
6 to 22 inches—strong brown loam
22 to 32 inches—mottled brownish yellow and yellowish red loam

32 to 46 inches—mottled brownish yellow, yellowish red, and strong brown clay loam
46 to 72 inches—mottled yellowish brown, yellowish red, and light gray clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Seasonal high water table: Perched, at a depth of 2 1/2 to 4 feet from December through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Severe
Tilth: Good
Slope class: Moderately sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils in the slightly lower landscape positions
- Saucier soils, which are on adjacent upland ridges and hillslopes, have mottles of chroma 2 or less within a depth of 30 inches, and are clayey in the lower part of the subsoil
- Poorly drained Smithton soils in drainageways

Similar soils:
- Well drained Benndale and loamy Poarch soils, which are in landscape positions similar to those of the Malbis soil

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Suited
Management concerns: Slope, erodibility, soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of $2^1/_2$ to 4 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: Low bearing strength
Management measures and considerations:
- Using material from another site for the roadbed can help to overcome the low bearing strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9A for loblolly pine

19—Malbis fine sandy loam, undulating

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Concave slopes
Slope: 2 to 8 percent
Shape of areas: Irregular
Size of areas: 5 to 40 acres

Composition

Malbis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 12 inches—light yellowish brown fine sandy loam that has brownish mottles

Subsoil:
12 to 28 inches—yellowish brown loam
28 to 35 inches—strong brown loam mottled in shades of red and yellow
35 to 44 inches—strong brown sandy clay loam mottled in shades of brown and yellow
44 to 62 inches—yellowish brown sandy clay loam mottled in shades of brown, yellow, red, and gray

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Seasonal high water table: Perched, at a depth of 2$^{1}/_{2}$ to 4 feet from December through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate or severe
Tilth: Good
Slope class: Gently sloping or moderately sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils in the slightly lower landscape positions
- Saucier soils, which are on adjacent upland ridges and hillslopes, have mottles of chroma 2 or less within a depth of 30 inches, and are clayey in the lower part of the subsoil
- Poorly drained Smithton soils in drainageways

Similar soils:
- Benndale and Poarch soils, which are in landscape positions similar to those of the Malbis soil but have coarser textures in the subsoil

Land Use

Dominant uses: Forestland, pasture, and hayland

Cropland
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of $2^1/_2$ to 4 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: Low strength
Management measures and considerations:
- Using material from another site for the roadbed can help to overcome the low bearing strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.

- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape shrubs.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9A for loblolly pine

20—McLaurin fine sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Broad, upland ridges
Landform position: Convex slopes on summits
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

McLaurin and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—dark grayish brown fine sandy loam

Subsurface layer:
8 to 12 inches—light yellowish brown fine sandy loam

Subsoil:
12 to 50 inches—yellowish red sandy loam
50 to 64 inches—strong brown and yellowish brown sandy loam
64 to 70 inches—yellowish red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Slight
Tilth: Good
Slope class: Nearly level
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils in the slightly lower landscape positions
- Lucy soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches thick and which are not bisequal
- Very poorly drained Croatan and Johnston soils in drainageways

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the McLaurin soil

- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions, have a redder subsoil than the McLaurin soil, and do not have a bisequum

Land Use

Dominant uses: Cropland, pasture, and forestland

Cropland
Suitability: Well suited
Management concerns: Droughtiness and soil fertility
Management measures and considerations:
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility and droughtiness
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment limitations
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Using tracked or low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: None

Management measures and considerations:
- No significant limitations affect septic tank absorption fields.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility and droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2s
Forestland ordination symbol: 9A for loblolly pine

21—McLaurin fine sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Broad, upland ridges and side slopes
Landform position: Slightly convex slopes on summits
Shape of areas: Irregular
Size of areas: 5 to 400 acres

Composition

McLaurin and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 10 inches—strong brown sandy loam

Subsoil:
10 to 28 inches—yellowish red sandy loam
28 to 37 inches—strong brown and yellowish brown sandy loam
37 to 72 inches—red sandy loam that has strong brown and red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Good

Slope class: Gently sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils in the slightly lower landscape positions
- Lucy soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Very poorly drained Johnston soils in drainageways

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the McLaurin soil
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions and have a redder subsoil

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Well suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Equipment limitations
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

- Using tracked or low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- No significant limitations affect septic tank absorption fields.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility and droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2e
Forestland ordination symbol: 9A for loblolly pine

22—McLaurin fine sandy loam, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland ridges
Landform position: Slightly convex slopes on summits
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

McLaurin and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 10 inches—light yellowish brown fine sandy loam
10 to 14 inches—yellowish brown sandy loam

Subsoil:
14 to 29 inches—yellowish red sandy loam
29 to 36 inches—yellowish red sandy loam that has strong brown mottles
36 to 62 inches—red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Severe
Tilth: Good
Slope class: Moderately sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils in the slightly lower landscape positions
- Lucy soils, which have sandy surface and subsoil layers with a combined thickness of 20 to 40 inches
- Very poorly drained Croatan soils in drainageways

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the McLaurin soil
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions and have a redder subsoil than the McLaurin soil

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited

Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Equipment limitations
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Using tracked or low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: None

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility and droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9A for loblolly pine

23—McLaurin fine sandy loam, undulating

Setting

Landscape: Coastal Plain
Landform: Upland ridges
Landform position: Slightly convex slopes on summits
Slope: 0 to 8 percent

Shape of areas: Irregular
Size of areas: 5 to 100 acres

Composition

McLaurin and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 8 inches—brown fine sandy loam

Subsoil:
8 to 30 inches—yellowish red sandy loam
30 to 38 inches—yellowish red sandy loam that has strong brown and red mottles
38 to 48 inches—yellowish red sandy clay loam
48 to 60 inches—red sandy clay loam that has yellowish red and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: None to severe
Tilth: Good
Slope class: Nearly level to moderately sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils in the slightly lower landscape positions
- Lucy soils, which have sandy surface and subsoil layers with a combined thickness of 20 to 40 inches
- Very poorly drained Croatan soils in drainageways

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the McLaurin soil
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the McLaurin soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions and have a redder subsoil than the McLaurin soil

Land Use

Dominant uses: Forestland

Cropland
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland (fig. 6)
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Erodibility and equipment use

Figure 6.—A well established pasture that is suitable for livestock grazing in an area of McLaurin fine sandy loam, undulating.

Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Establishing a permanent plant cover on roads and landings after logging and reforesting immediately after harvest using minimal site preparation and recommended tree species help to control erosion and the siltation of streams.
- Using tracked or low-pressure ground equipment minimizes rutting and compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility and droughtiness
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9A for loblolly pine

24—Pits-Udorthents complex

Setting

Landscape: Coastal Plain
Landform: Variable upland ridges
Slope: 2 to 25 percent
Shape of areas: Variable
Size of areas: 10 acres or less

Composition

This map unit consists of disturbed areas of McLaurin, Ruston, Smithdale, clayey Susquehanna, and Troup soils. It makes up less than 1 percent of survey area.

Typical Profile

Due to the variability of the map unit, a typical profile is not described.

Properties and Qualities

Depth class: Variable
Drainage class: Well drained to very poorly drained with shallow ponding
Permeability: Variable
Available water capacity: Low
Seasonal high water table: Variable
Shrink-swell potential: Variable
Flooding: None
Degree of erosion: Severe
Tilth: Not applicable
Slope class: Nearly level to strongly sloping
Parent material: Variable sediments

Minor Components

Dissimilar soils:
- Variable

Similar soils:
- Variable

Land Use

Dominant uses: Forestland

Cropland
Suitability: Unsuited

Pasture and hayland
Suitability: Unsuited

Forestland
Suitability: Unsuited

Dwellings without basements
Suitability: Unsuited

Septic tank absorption fields
Suitability: Unsuited

Local roads and streets
Suitability: Unsuited

Lawns and landscaping
Suitability: Unsuited

Interpretive Groups

Land capability classification: 8s
Forestland ordination symbol: 8S

25—Poarch fine sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Broad, upland ridges
Landform position: Slightly convex or concave slopes
Shape of areas: Oblong or irregular
Size of areas: 5 to 75 acres

Composition

Poarch and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark gray fine sandy loam

Subsurface layer:
4 to 13 inches—light yellowish brown fine sandy loam

Subsoil:
13 to 28 inches—yellowish brown sandy loam
28 to 35 inches—yellowish brown loam that has red mottles
35 to 62 inches—loam mottled in shades of yellow, red, brown, and gray

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 2$^{1}/_{2}$ to 5 feet from December through March
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Good
Slope class: Gently sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils on broad, upland summits
- Poorly drained Smithton soils in drainageways

Similar soils:
- Benndale soils, which do not have horizons with 5 percent or more plinthite segregations in the subsoil
- Malbis soils, which are in landscape positions similar to those of the Poarch soil, contain 5 percent or more plinthite segregations, and have more clay in the subsoil than the Poarch soil

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland (fig. 7)
Suitability: Well suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Figure 7.—An area of Poarch fine sandy loam, 2 to 5 percent slopes, where peanuts are ready for harvest.

Pasture and hayland

Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:

- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland

Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:

- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat

Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Management concerns: None
Management measures and considerations:

- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: none

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of 2½ to 5 feet from December through March.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: Low bearing strength
Management measures and considerations:
- Using material from another site for the roadbed can help to overcome the low bearing strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2e
Forestland ordination symbol: 9A for loblolly pine

26—Ruston fine sandy loam, 0 to 1 percent slopes

Setting

Landscape: Coastal Plain (USDA–SCS, 1981)
Landform: Broad, upland ridges
Landform position: Planar to slightly concave
Shape of areas: Irregular
Size of areas: 20 to 100 acres

Composition

Ruston and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—dark grayish brown fine sandy loam

Subsurface layer:
3 to 8 inches—yellowish brown fine sandy loam

Subsoil:
8 to 14 inches—yellowish red sandy clay loam

14 to 38 inches—red sandy clay loam
38 to 46 inches—red and yellowish brown fine sandy loam
46 to 62 inches—red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Slight
Tilth: Good
Slope class: Nearly level
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils, which are in the slightly lower landscape positions
- Lucy soils, which are in landscape positions similar to those of the Ruston soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Somewhat excessively drained Troup soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 79 inches

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the Ruston soil
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the Ruston soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the Ruston soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions and have a redder subsoil than the Ruston soil

Land Use

Dominant uses: Cropland, pasture, and forestland

Cropland
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the

application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Forestland
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Slow percolation
Management measures and considerations:
- Installing the distribution lines during dry periods helps to control smearing and sealing of trench walls.
- Increasing the size of the absorption fields and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 1
Forestland ordination symbol: 9A for loblolly pine

27—Ruston fine sandy loam, 1 to 3 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland ridges
Landform position: Planar to slightly convex
Shape of areas: Irregular

Size of areas: 5 to 80 acres

Composition

Ruston and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam

Subsoil:
7 to 18 inches—red loam
18 to 29 inches—red loam that has brownish yellow mottles
29 to 38 inches—yellowish red fine sandy loam that has yellowish brown mottles
38 to 62 inches—red sandy clay loam that has strong brown mottles in the lower part

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: None to moderate
Tilth: Good
Slope class: Nearly level to gently sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils, which are in the slightly lower landscape positions
- Poorly drained Smithton soils in drainageways
- Lucy soils, which are in landscape positions similar to those of the Ruston soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Somewhat excessively drained Troup soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 79 inches

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the Ruston soil
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the Ruston soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the Ruston soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions and have a redder subsoil than the Ruston soil

Land Use

Dominant uses: Cropland, pasture, and forestland

Cropland
Suitability: Well suited

Management concerns: Soil fertility; erodibility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Slow percolation
Management measures and considerations:
- Installing the distribution lines during dry periods helps to control smearing and sealing of trench walls.
- Increasing the size of the absorption fields and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility

Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2e
Forestland ordination symbol: 9A for loblolly pine

28—Ruston fine sandy loam, undulating

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Slightly convex
Slope: 0 to 8 percent
Shape of areas: Irregular
Size of areas: 5 to 80 acres

Composition

Ruston and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown fine sandy loam

Subsurface layer:
4 to 6 inches—yellowish brown fine sandy loam

Subsoil:
6 to 24 inches—red sandy clay loam
24 to 35 inches—red sandy loam that has yellowish red mottles
35 to 60 inches—red sandy clay loam that has yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Slight to severe
Tilth: Good
Slope class: Nearly level to moderately sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained, sandy Eustis soils, which are in the slightly lower landscape positions
- Lucy soils, which are in landscape positions similar to those of the Ruston soil and

have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Somewhat excessively drained Troup soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 79 inches
- Poorly drained Smithton soils in drainageways

Similar soils:
- Loamy Benndale soils, which are in the lower landscape positions and have a browner subsoil than the Ruston soil
- Loamy Latonia soils, which are in the lower positions on marine terraces and stream terraces
- Loamy Lucedale soils, which are in landscape positions similar to those of the Ruston soil but have more clay in the subsoil and are darker red
- Loamy Ruston soils, which are in landscape positions similar to those of the Ruston soil but have more clay in the subsoil
- Loamy Smithdale soils, which are in the lower landscape positions and have a redder subsoil

Land Use

Dominant uses: Forestland

Cropland
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland (fig. 8)
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited

Figure 8.—A pine plantation in an area of Ruston fine sandy loam, undulating. Such sites are common on this soil in the county.

Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Slow percolation
Management measures and considerations:
- Installing the distribution lines during dry periods helps to control smearing and sealing of trench walls.
- Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility

Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9A for loblolly pine

29—Saucier fine sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Slightly convex or slightly concave slopes
Shape of areas: Irregular
Size of areas: 5 to 200 acres

Composition

Saucier and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown fine sandy loam

Subsurface layer:
4 to 10 inches—brown loam

Subsoil:
10 to 20 inches—yellowish brown loam
20 to 28 inches—yellowish brown loam that has mottles in shades of red and yellow
28 to 35 inches—silty clay loam mottled in shades of yellow, red, and gray
35 to 62 inches—light gray clay that has mottles in shades of red and brown

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of $2^{1}/_{2}$ to 4 feet from January through March
Shrink-swell potential: Moderate
Flooding: None
Degree of erosion: Moderate
Tilth: Good
Slope class: Gently sloping
Parent material: Loamy over clayey sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils, which are on broad, upland flats and are sandier than the Saucier soil

- Loamy Malbis soils, which are in landscape positions similar to those of the Saucier soil but do not have mottles with chroma of 2 or less within a depth of 30 inches
- Somewhat poorly drained Susquehanna soils, which are in landscape positions similar to those of the Saucier soil or higher and have a loamy over clayey subsoil
- Poorly drained Smithton soils in drainageways and depressions

Similar soils:
- Scattered areas of Saucier soils that contain less than 5 percent plinthite segregations in the subsoil

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Well suited
Management concerns: Erodibility, wetness, and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Installing a subsurface drainage system improves the productivity of moisture-sensitive crops, such as cotton.

Pasture and hayland (fig. 9)
Suitability: Well suited
Management concerns: Soil fertility and erodibility

Figure 9.—An area of Saucier fine sandy loam, 2 to 5 percent slopes, that has been fenced and is used as temporary pasture for horses. Many such areas are in the county.

Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Restricting logging to the drier periods minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of $2^1/_2$ to 4 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: None

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 2e
Forestland ordination symbol: 9W for loblolly pine

30—Saucier fine sandy loam, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland hillslopes
Landform position: Slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

Saucier and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark gray fine sandy loam

Subsurface layer:
5 to 12 inches—pale brown fine sandy loam

Subsoil:
12 to 28 inches—yellowish brown clay loam that has mottles in shades of red and brown
28 to 37 inches—mottled light brownish gray, brownish yellow, and red clay loam
37 to 60 inches—mottled gray, yellowish red, yellowish brown, and light gray silty clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of $2^{1}/_{2}$ to 4 feet from January through March
Shrink-swell potential: Moderate
Flooding: None
Degree of erosion: Severe
Tilth: Good
Slope class: Moderately sloping
Parent material: Loamy over clayey sediments

Minor Components

Dissimilar soils:
- Somewhat poorly drained Escambia soils, which are on broad, upland flats and have a subsoil that contains less clay than the subsoil of the Saucier soil
- The loamy Malbis soils, which are in landscape positions similar to those of the Saucier soil but do not have mottles with chroma of 2 or less within a depth of 30 inches
- Somewhat poorly drained Susquehanna soils, which are in landscape positions similar to those of the Saucier soil or higher and have a loamy over clayey subsoil
- Poorly drained Smithton soils in drainageways and depressions

Similar soils:
- Scattered areas of Saucier soils that contain less than 5 percent plinthite segregations in the subsoil

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Suited
Management concerns: Erodibility, wetness, and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Installing a subsurface drainage system improves the productivity of moisture-sensitive crops, such as cotton.

Pasture and hayland
Suitability: Well suited
Management concerns: Soil fertility and erodibility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Restricting logging to periods when the soil is not saturated minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation

Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of 2 to 3 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: Low strength
Management measures and considerations:
- Using material from another site for the roadbed can help to overcome the low bearing strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9W for loblolly pine

31—Saucier fine sandy loam, undulating

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Slightly convex slopes
Slope: 2 to 8 percent
Shape of areas: Irregular
Size of areas: 5 to 100 acres

Composition

Saucier and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark gray fine sandy loam

Subsurface layer:
5 to 8inches—brown fine sandy loam

Subsoil:
8 to 12 inches—yellowish brown loam
12 to 22 inches—yellowish brown loam that has yellowish red mottles
22 to 28 inches—yellowish brown loam that has pale brown and strong brown mottles
28 to 42 inches—mottled light brownish gray, light yellowish brown, strong brown, and yellowish red clay loam

42 to 70 inches—mottled red, yellowish brown, light brownish gray, and brownish yellow silty clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 2 1/2 to 4 feet from January through March
Shrink-swell potential: Moderate
Flooding: None
Degree of erosion: Moderate or severe
Tilth: Good
Slope class: Gently sloping or moderately sloping
Parent material: Loamy over clayey sediments

Minor Components

Dissimilar soils:
- The loamy Malbis soils, which are in landscape positions similar to those of the Saucier soil but do not have mottles with chroma of 2 or less within a depth of 30 inches
- The loamy Poarch soils, which are in the slightly higher landscape positions and have a subsoil that contains less clay than the subsoil of the Saucier soil
- Somewhat poorly drained Susquehanna soils, which are in landscape positions similar to those of the Saucier soil but have a loamy surface layer and a clayey subsoil
- Poorly drained Smithton soils in drainageways and depressions

Similar soils:
- Scattered areas of Saucier soils that contain less than 5 percent plinthite segregations in the subsoil

Land Use

Dominant uses: Forestland

Cropland
Suitability: Well suited
Management concerns: Erodibility due to slope; wetness; soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Installing a subsurface drainage system improves the productivity of moisture-sensitive crops, such as cotton

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility due to slope; soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Restricting logging to periods when the soil is not saturated minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Well suited
Management concerns: None

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slow percolation
Management measures and considerations:
- This map unit is difficult to manage for septic tank absorption fields because the seasonal high water table is at a depth of $2^{1}/_{2}$ to 4 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: Low strength
Management measures and considerations:
- Using material from another site for the roadbed can help to overcome the low bearing strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 3e
Forestland ordination symbol: 9W for loblolly pine

32—Saucier-Susquehanna association, 2 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Convex and concave slopes
Shape of areas: Irregular
Size of areas: 160 to 900 acres

Composition

Saucier and similar soils: 59 percent
Susquehanna and similar soils: 32 percent
Dissimilar soils: 9 percent

Typical Profile

Saucier
Surface layer:
0 to 7 inches—grayish brown fine sandy loam

Subsurface layer:
7 to 12 inches—light yellowish brown fine sandy loam

Subsoil:
12 to 28 inches—yellowish brown loam
28 to 35 inches—yellowish brown loam that has gray and yellowish red mottles
35 to 60 inches—mottled gray, red, and yellow clay loam

Susquehanna
Surface layer:
0 to 3 inches—very dark grayish brown silt loam

Subsurface layer:
3 to 12 inches—mixed very dark grayish brown and strong brown silt loam

Subsoil:
12 to 23 inches—yellowish red clay loam that has strong brown and light gray mottles
23 to 56 inches—mottled yellowish red, strong brown, and light gray clay loam
56 to 60 inches—light brownish gray silty clay that has yellowish red, strong brown, and yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Saucier—moderately well drained; Susquehanna—somewhat poorly drained
Permeability: Saucier—slow; Susquehanna—very slow
Available water capacity: High
Seasonal high water table: Saucier—perched, at a depth of 2$^{1}/_{2}$ to 4 feet from January through March; Susquehanna—more than 6 feet below the surface
Shrink-swell potential: Saucier—moderate; Susquehanna—high
Flooding: None
Degree of erosion: Moderate or severe
Tilth: Saucier—good; Susquehanna—fair
Slope class: Gently sloping or moderately sloping
Parent material: Saucier—stratified loamy and clayey sediments; Susquehanna—clayey sediments

Minor Components

Dissimilar soils:
- Poorly drained Atmore soils in depressions
- Poorly drained Smithton soils in drainageways
- Well drained Benndale and Malbis soils on convex knolls
- Moderately well drained Poarch soils on convex knolls

Similar soils:
- Scattered areas of Susquehanna soils that have a surface layer of sandy loam

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Suited
Management concerns: Erodibility, wetness, soil fertility, and herbicide retention
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- In undrained areas, planting wetness-tolerant species increases productivity.
- Restricting tillage to periods when the soils are not wet minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Because the soils have a high content of clay, they retain soil-applied herbicides. The concentration of herbicides may become high enough to damage future crops.

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility, wetness, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Preventing overgrazing or restricting grazing to periods when the soils are not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Restricting logging to periods when the soils are not saturated minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Saucier—well suited; Susquehanna—poorly suited
Management concerns: Saucier—none; Susquehanna—shrink-swell potential
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to prevent the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Saucier—wetness and slow percolation; Susquehanna—slow percolation
Management measures and considerations:
- The Saucier soil is difficult to manage for septic tank absorption fields because it has a seasonal high water table at a depth of $2^1/_2$ to 4 feet.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table, increasing the size of the absorption field, and installing the distribution lines on the contour improve system performance.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Saucier—well suited; Susquehanna—poorly suited
Management concerns: Saucier—none; Susquehanna—low strength, high shrink-swell potential
Management measures and considerations:
- Removing as much of the clay that has a high shrink-swell potential as possible and increasing the thickness of the base aggregate improve soil performance.
- Installing geotextile fabric between the base aggregate and the final surface of the road improves performance.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope help to overcome the low strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: Saucier—3e; Susquehanna—6e
Forestland ordination symbol: Saucier—9W; Susquehanna—8C

33—Smithdale fine sandy loam, 8 to 15 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland hillslopes
Landform position: Convex slopes
Shape of areas: Irregular
Size of areas: 20 to 200 acres

Composition

Smithdale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 2 inches—dark grayish brown fine sandy loam

Subsurface layer:
2 to 10 inches—yellowish brown sandy loam

Subsoil:
10 to 32 inches—red sandy clay loam
32 to 38 inches—red sandy clay loam that has yellowish red mottles
38 to 62 inches—red sandy loam that has mottles in shades of brown and yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Severe or very severe
Tilth: Good
Slope class: Strongly sloping
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Somewhat excessively drained Eustis soils, which are in landscape positions similar to those of the Smithdale soil but have a sandy particle-size class
- Sandy Lucy and Troup soils, which are on the lower parts of side slopes
- Poorly drained Smithton soils, which are in drainageways

Similar soils:
- Loamy Benndale soils, which are in landscape positions similar to those of the Smithdale soil but have a browner subsoil
- Loamy McLaurin and Ruston soils, which are on upland ridges and hillslopes and have a bisequum

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Unsuited
Management concerns: Erodibility due to steepness of slope

Management measures and considerations:
- A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Suited
Management concerns: Erodibility due to steepness of slope; equipment use; soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Fencing livestock away from creeks and streams helps to control erosion of the streambanks and sedimentation of the creeks and streams.
- The slope may limit equipment use in the steeper areas when hay is harvested.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: None
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope or building in the less sloping areas helps to overcome the slope limitation.
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing roads to conform to the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Steepness of slope and soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases the rate of water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep soil on the site.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 4e
Forestland ordination symbol: 9A for loblolly pine

34—Smithdale fine sandy loam, 15 to 25 percent slopes

Setting

Landscape: Coastal Plain
Landform: Upland hillslopes
Landform position: Convex slopes on shoulders and backslopes
Shape of areas: Irregular
Size of areas: 20 to 500 acres

Composition

Smithdale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 13 inches—yellowish brown fine sandy loam

Subsoil:
13 to 25 inches—yellowish red sandy clay loam
25 to 35 inches—yellowish red loam
35 to 48 inches—yellowish red sandy loam
48 to 62 inches—yellowish red sandy loam that has streaks of uncoated sand grains

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Very severe
Tilth: Good
Slope class: Moderately steep
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Sandy Lucy and Troup soils, which are on the lower parts of side slopes
- Poorly drained Smithton soils, which are in drainageways

Similar soils:
- Loamy Benndale soils, which are in landscape positions similar to those of the Smithdale soil but have a browner subsoil
- Loamy McLaurin and Ruston soils, which are on upland ridges and hillslopes and have a bisequum

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Unsuited
Management concerns: Erodibility and equipment use
Management measures and considerations:
- A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Management concerns: Erodibility and equipment use due to steepness of slope; soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Fencing livestock away from creeks and streams helps to control erosion of the streambanks and sedimentation of the creeks and streams.
- The slope limits equipment use in the steeper areas.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Forestland
Suitability: Well suited
Management concerns: Erodibility and equipment use
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
- Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and the siltation of streams.
- Leaving a buffer zone of trees and shrubs adjacent to streams helps to control siltation and provides shade for the surface of the water, thereby improving aquatic habitat.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—well suited; wetland wildlife—very poorly suited

Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Poorly suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing structures to conform to the natural slope or building in the less sloping areas helps to overcome the slope limitation.
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Steepness of slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Steepness of slope
Management measures and considerations:
- Designing roads to conform to the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Extensive shaping and grading are needed to conform roads to the contour.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Steepness of slope and soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish and maintain lawns and landscape plants.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases the rate of water infiltration.
- Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep soil on the site.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 7e
Forestland ordination symbol: 9R for loblolly pine

35—Smithton fine sandy loam, frequently flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Flat to slightly concave slopes
Slope: 0 to 2 percent

Shape of areas: Long and narrow
Size of areas: 10 to 400 acres

Composition

Smithton and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—very dark grayish brown fine sandy loam

Subsurface layer:
4 to 14 inches—dark grayish brown fine sandy loam

Subsoil:
14 to 20 inches—light brownish gray fine sandy loam that has light yellowish brown and brown mottles
20 to 36 inches—light brownish gray fine sandy loam that has yellowish brown mottles
36 to 48 inches—light brownish gray clay loam that has mottles in shades of brown, yellow, and gray
48 to 62 inches—light gray fine sandy loam that has gray, yellow, and yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: Moderate
Seasonal high water table: Perched, at the surface to a depth of 1 foot from December through May
Shrink-swell potential: Low
Flooding: Frequent for very brief to long periods from December through May
Degree of erosion: Slight
Tilth: Good
Slope class: Nearly level
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied to the surface layer
Parent material: Loamy sediments

Minor Components

Dissimilar soils:
- Loamy Atmore soils, which are in upland depressions and have horizons with 5 percent or more plinthite segregations in the subsoil
- Somewhat poorly drained Escambia soils, which are at the slightly higher elevations and have horizons with 5 percent or more plinthite segregations in the subsoil
- Moderately well drained Harleston soils, which are at the slightly higher elevations on terraces
- Very poorly drained, loamy and mucky Johnston and Croatan soils, which are at the heads of drains

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Unsuited
Management concerns: Wetness and flooding

Management measures and considerations:
- A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Suited to pasture; poorly suited to hayland
Management concerns: Flooding and wetness
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Harvesting hay crops as soon as possible reduces the risk of damage from the flooding.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.

Forestland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—suited; wetland wildlife—suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Interpretive Groups

Land capability classification: 5w
Forestland ordination symbol: 9W for loblolly pine

36—Smithton-Harleston association, occasionally flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains and terraces
Landform position: Smithton—planar to slightly concave slopes; Harleston—slightly convex slopes
Slope: 0 to 2 percent
Shape of areas: Elongated
Size of areas: 160 to 300 acres

Composition

Smithton and similar soils: 45 percent
Harleston and similar soils: 40 percent
Dissimilar soils: 15 percent

Typical Profile

Smithton
Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 12 inches—grayish brown sandy loam

Subsoil:
12 to 28 inches—light brownish gray sandy loam that has brownish yellow and yellowish brown mottles
28 to 40 inches—loam mottled in shades of gray and brown
40 to 60 inches—sandy loam mottled in shades of gray and brown

Harleston
Surface layer:
0 to 5 inches—dark grayish brown fine sandy loam

Subsurface layer:
5 to 13 inches—pale brown loam

Subsoil:
13 to 25 inches—light yellowish brown loam that has yellowish brown and pale brown mottles
25 to 35 inches—yellowish brown loam that has mottles in shades of yellow and gray
35 to 50 inches—sandy loam mottled in shades of brown and gray
50 to 60 inches—pale brown sandy loam that has mottles in shades of brown, yellow, and gray

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Smithton—poorly drained: Harleston—moderately well drained
Permeability: Smithton—moderately slow; Harleston—moderate
Available water capacity: Moderate

Seasonal high water table: Smithton—perched, at the surface to a depth of 1 foot from December through May; Harleston—at a depth of 2 to 3 feet deep from November through March
Shrink-swell potential: Low
Flooding: Smithton—occasional for very brief to long periods from December through May; Harleston—occasional for very brief periods from December through April
Degree of erosion: None or slight
Tilth: Good
Slope class: Nearly level
Parent material: Smithton—loamy sediments; Harleston—loamy sediments

Minor Components

Dissimilar soils:
- Loamy Atmore soils, which are on broad, upland flats, are in depressions, and have horizons with 5 percent or more plinthite segregations in the subsoil
- Somewhat poorly drained Escambia soils, which are at the slightly higher elevations on terraces and have horizons with 5 percent or more plinthite segregations
- Moderately well Harleston soils at the slightly higher elevations on terraces
- Very poorly drained, loamy and mucky Johnston and Croatan soils, which are at the heads of drains

Similar soils:
- Scattered areas of Smithton soils that are frequently flooded

Land Use

Dominant uses: Forestland, pasture, and row crops

Cropland
Suitability: Smithton—unsuited; Harleston—suited
Management concerns: Wetness and flooding
Management measures and considerations:
- Harvesting row crops as soon as possible reduces the risk of damage from the flooding.
- Installing a drainage system that includes open ditches, perforated tile, or land shaping increases productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- In undrained areas, planting wetness-tolerant species increases productivity.

Pasture and hayland
Suitability: Smithton—suited to pasture and poorly suited to hayland; Harleston—well suited to pasture and hayland
Management concerns: Wetness and flooding
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Harvesting hay crops as soon as possible reduces the risk of damage from the flooding.
- Preventing overgrazing or restricting grazing to periods when the soils are not too wet minimizes compaction and helps to maintain productivity and tilth.
- Artificial drainage may be needed to maximize productivity in some areas.

Forestland
Suitability: Smithton—suited; Harleston—well suited

Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential of the Smithton soil to support habitat for: Openland wildlife—suited; forestland wildlife—suited; wetland wildlife—suited
Potential of the Harleston soil to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Wetness and flooding
Management measures and considerations:
- A site that has better suited soils should be selected.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Wetness and flooding
Management measures and considerations:
- Constructing roads on raised, well-compacted fill material helps to overcome the wetness.
- Well-compacted fill material can be used as a road base to help elevate roads above the flooding.

Lawns and landscaping
Suitability: Smithton—poorly suited; Harleston—suited
Management concerns: Wetness and flooding
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- A surface or subsurface drainage system may be needed.
- This map unit is difficult to manage because of the flooding, which severely limits use during periods of inundation.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: Smithton—4w; Harleston—2w
Forestland ordination symbol: 9W for loblolly pine

37—Susquehanna silt loam, 1 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Ridgetops
Landform position: Slightly concave to slightly convex slopes
Shape of areas: Irregular
Size of areas: 5 to 800 acres

Composition

Susquehanna and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown silt loam

Subsurface layer:
5 to 8 inches—light yellowish brown silt loam

Subsoil:
8 to 20 inches—strong brown clay that has mottles in shades of red, gray, and brown
20 to 30 inches—light gray silty clay that has mottles in shades of brown
30 to 61 inches—light brownish gray silty clay that has mottles in shades of red and brown

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Available water capacity: High
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: High
Flooding: None
Degree of erosion: None to moderate
Tilth: Good
Slope class: Nearly level to gently sloping
Parent material: Clayey sediments

Minor Components

Dissimilar soils:
- Well drained Malbis and moderately well drained Saucier soils, which are loamy and contain 5 percent or more plinthite segregations in the subsoil
- Very poorly drained Croatan and Johnston soils in drainageways

Similar soils:
- Scattered areas of Susquehanna soils that have a surface layer of sandy loam

Land Use

Dominant uses: Forestland, pasture, and cropland

Cropland
Suitability: Suited
Management concerns: Erodibility, wetness, soil fertility, and herbicide retention
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, no-till cropping, and crop residue management

reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using open ditches and diversions increases productivity.
- Restricting tillage to periods when the soil is not wet minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Because the soil has a high content of clay, it retains soil-applied herbicides. The concentration of herbicides may become high enough to damage future crops.

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility, wetness, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Equipment use
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Restricting logging to the drier periods minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Poorly suited
Management concerns: Shrink-swell
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to prevent the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Slow percolation
Management measures and considerations:
- The local Health Department can be contacted for guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: High shrink-swell potential and low strength

Management measures and considerations:
- Removing as much of the clay that has a high shrink-swell potential as possible and increasing the thickness of the base aggregate improve soil performance.
- Installing geotextile fabric between the base aggregate and the final surface of the road improves performance.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope help to overcome the low strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 4e
Forestland ordination symbol: 8C for loblolly pine

38—Susquehanna silt loam, 5 to 15 percent slopes

Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Convex slopes
Shape of areas: Irregular
Size of areas: 5 to 800 acres

Composition

Susquehanna and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsoil:
4 to 8 inches—yellowish red clay loam
8 to 19 inches—mottled red, yellowish brown, and light gray clay
19 to 31 inches—light gray clay that has mottles in shades of red and brown
31 to 60 inches—olive gray clay that has mottles in shades of yellow

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Available water capacity: High
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: High
Flooding: None
Degree of erosion: Severe
Tilth: Good

Slope class: Moderately sloping or strongly sloping
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied to the surface layer
Parent material: Clayey sediments

Minor Components

Dissimilar soils:
- Moderately well drained Poarch soils, which have less clay than the Susquehanna soil and contain 5 percent or more plinthite segregations in the subsoil
- Moderately well drained Saucier soils, which are fine-loamy and contain more than 5 percent plinthite segregations in the subsoil
- Very poorly drained Croatan and Johnston soils, which are in drainageways

Similar soils:
- Scattered areas of Susquehanna soils that have a surface layer of sandy loam

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Poorly suited
Management concerns: Erodibility, wetness, soil fertility, and herbicide retention
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- In undrained areas, planting wetness-tolerant species increases productivity.
- Restricting tillage to periods when the soils are not wet minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Because the soil has a high content of clay, it retains soil-applied herbicides. The concentration of herbicides may become high enough to damage future crops.

Pasture and hayland
Suitability: Suited
Management concerns: Erodibility, wetness, equipment use, and soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- The slope limits equipment use in the steeper areas.

Forestland
Suitability: Well suited
Management concerns: Equipment use
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.

- Restricting logging to the drier periods minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Poorly suited
Management concerns: High shrink-swell potential
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to prevent the damage caused by shrinking and swelling.
- Designing structures to conform to the natural slope improves performance.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Slow percolation
Management measures and considerations:
- The local Health Department can be contacted for guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: High shrink-swell potential and low strength
Management measures and considerations:
- Removing as much of the clay that has a high shrink-swell potential as possible and increasing the thickness of the base aggregate improve soil performance.
- Installing geotextile fabric between the base aggregate and the final surface of the road improves performance.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope help to overcome the low strength of the natural soil material.
- Designing roads to conform to the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Suited
Management concerns: Slope and soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- A surface or subsurface drainage system may be needed.
- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases the rate of water infiltration.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 6e
Forestland ordination symbol: 8C for loblolly pine

39—Susquehanna silt loam, undulating

Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Convex slopes
Slope: 1 to 8 percent
Shape of areas: Irregular
Size of areas: 5 to 800 acres

Composition

Susquehanna and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 2 inches—dark grayish brown silt loam

Subsoil:
2 to 8 inches—yellowish red clay loam
8 to 20 inches—mottled yellowish red, strong brown, light yellowish brown, and light gray clay
20 to 43 inches—light gray clay that has mottles in shades of red and brown
43 to 60 inches—olive gray clay that has mottles in shades of red and brown

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Available water capacity: High
Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: High
Flooding: None
Degree of erosion: None to severe
Tilth: Good
Slope class: Nearly level to moderately sloping
Parent material: Clayey sediments

Minor Components

Dissimilar soils:
- Poorly drained Atmore soils, which are in upland depressions and contain 5 percent or more plinthite segregations in the subsoil
- Moderately well drained Malbis soils, which are less sandy than the Susquehanna soil and contain 5 percent or more plinthite segregations in the subsoil
- Moderately well drained Saucier soils, which are fine-loamy and contain more than 5 percent plinthite segregations in the subsoil

Similar soils:
- Scattered areas of Susquehanna soils that have a surface layer of sandy loam

Land Use

Dominant uses: Forestland

Cropland
Suitability: Poorly suited
Management concerns: Erodibility due to slope; wetness; soil fertility; herbicide retention

Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- In undrained areas, planting wetness-tolerant species increases productivity.
- Restricting tillage to periods when the soil is not wet minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Because the soil has a high content of clay, it retains soil-applied herbicides. The concentration of herbicides may become high enough to damage future crops (Soil Survey Division Staff, 1993).

Pasture and hayland
Suitability: Well suited
Management concerns: Erodibility due to slope; wetness; soil fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Preventing overgrazing or restricting grazing to periods when the soil is not too wet minimizes compaction and helps to maintain productivity and tilth.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

Forestland
Suitability: Well suited
Management concerns: Equipment use
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Restricting logging to the drier periods minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife—well suited; forestland wildlife—well suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Poorly suited
Management concerns: High shrink-swell potential
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material helps to prevent the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Slow percolation
Management measures and considerations:
- The local Health Department can be contacted for guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: High shrink-swell potential and low strength
Management measures and considerations:
- Removing as much of the clay that has a high shrink-swell potential as possible and increasing the thickness of the base aggregate improve soil performance.
- Installing geotextile fabric between the base aggregate and the final surface of the road improves performance.
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads to conform to the natural slope help to overcome the low strength of the natural soil material.

Lawns and landscaping
Suitability: Well suited
Management concerns: Soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Grasses, shrubs, and trees should be carefully selected.

Interpretive Groups

Land capability classification: 4e
Forestland ordination symbol: 8C for loblolly pine

40—Troup loamy sand, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Convex slopes
Shape of areas: Irregular
Size of areas: 10 to 150 acres

Composition

Troup and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loamy sand

Subsurface layer:
4 to 23 inches—yellowish brown loamy sand
23 to 57 inches—strong brown loamy sand

Subsoil:
57 to 66 inches—yellowish red loamy sand that has reddish yellow and red mottles
66 to 70 inches—yellowish red sandy loam that has red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate
Available water capacity: Moderate

Seasonal high water table: More than 6 feet below the surface
Shrink-swell potential: Low
Flooding: None
Degree of erosion: Moderate
Tilth: Fair
Slope class: Moderately sloping
Parent material: Unconsolidated sandy and loamy sediments

Minor Components

Dissimilar soils:
- Well drained Ruston soils, which are on upland ridges, have more clay throughout than the Troup soil, and are bisequal
- Well drained Smithdale soils, which are on the higher upland side slopes and have more clay in the upper part of the subsoil than the Troup soil
- Poorly drained Smithton soils in drainageways

Similar soils:
- Well drained Lucy soils, which are in landscape positions similar to those of the Troup soil but have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Well drained McLaurin soils, which are on upland ridges and hillslopes and have a loamy subsoil

Land Use

Dominant uses: Forestland and pasture

Cropland
Suitability: Poorly suited
Management concerns: Erodibility, equipment use, droughtiness, and soil fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of rainfall.
- Using conservation tillage that includes maximum ground cover enhances infiltration of rainfall and reduces moisture loss due to evaporation.
- Applying supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using equipment that has low-pressure tires increases traction and minimizes the rutting caused by the high content of sand in the soil.

Pasture and hayland
Suitability: Suited
Management concerns: Soil fertility, erodibility, equipment use, and droughtiness
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- When hayland and pasture are established, maintained, or renovated, the application of lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using drought-tolerant plants increases productivity.

- Using equipment that has low-pressure tires increases traction and minimizes the rutting caused by the high content of sand in the soil.

Forestland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Planting appropriate species as recommended by a forester maximizes productivity and helps to ensure planting success.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Using tracked or low-pressure ground equipment and harvesting trees when the soil is moist improve trafficability.

Wildlife habitat
Potential to support habitat for: Openland wildlife—suited; forestland wildlife—poorly suited; wetland wildlife—very poorly suited
Management concerns: None
Management measures and considerations:
- Wildlife habitat can be improved by planting suitable species.

Dwellings without basements
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Designing structures to conform to the natural slope helps to overcome the slope limitation.

Septic tank absorption fields
Suitability: Suited
Management concerns: Poor filtering capacity
Management measures and considerations:
- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness and soil fertility
Management measures and considerations:
- Topsoil should be stockpiled before an area is otherwise disturbed and then replaced before the area is landscaped.
- Lime, fertilizer, mulch, and irrigation help to establish lawns and landscape plants.
- Applying supplemental irrigation and seeding or planting varieties adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
- Quick and permanent establishment of ground cover helps to stabilize the soil and improves trafficability.

Interpretive Groups

Land capability classification: 4s
Forestland ordination symbol: 8S for loblolly pine

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 8 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 122,000 acres in the survey area, or nearly 42 percent of the total acreage, meets the soil requirements for prime farmland. About 8,500 acres of this prime farmland is used for crops. These crops, mainly corn, soybeans, and wheat, account for much of the total agricultural income of the county each year.

The map units in the survey area that are considered prime farmland are listed at the end of this section. This list does not constitute a recommendation for a particular land use. Some soils that have a seasonal high water table and all soils that are frequently flooded during the growing season qualify as prime farmland only in areas where these limitations have been overcome by drainage measures or flood control. The need for these measures is indicated after the map unit name below. Onsite evaluation is needed to determine whether or not these limitations have been overcome by corrective measures.

The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

The soils identified as prime farmland in Stone County are:

1 Annemaine loam, occasionally flooded
3 Benndale fine sandy loam, 2 to 5 percent slopes
7 Escambia fine sandy loam, 0 to 2 percent slopes
11 Harleston fine sandy loam, occasionally flooded
12 Jena-Nugent complex, frequently flooded (where protected from flooding or not frequently flooded during the growing season)

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one

limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

Patty Rogers, district conservationist, Natural Resources Conservation Service, prepared this section.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Stone County has about 39,000 acres of crops and pasture. About 1,000 acres is used for specialty crops and row crops. About 38,000 acres is used for pasture and hayland. Most of the soils in the county have naturally low fertility, and all of the soils are naturally acid. Most of the soils on uplands, terraces, and flood plains on the southern Coastal Plain are very strongly acid or strongly acid. Soils on the flood plains are naturally higher in plant nutrients than most of the soils on uplands. In most of the soils on the uplands, the levels of available phosphorus and potash are naturally low. On all soils, applications of lime and fertilizer should be based on the results of soil testing and the expected level of yields. The Cooperative Extension Service can help determine the kinds and amounts of lime and fertilizer to apply.

The major crops produced in the county are specialty crops, including blueberries, cabbage, peanuts, pecans, squash, and watermelons. A few row crops, including corn, cotton, grain sorghum, soybeans, and wheat, are grown on a small scale.

The productivity of soils is reduced if the surface layer is lost to erosion and parts of the subsoil are mixed with the plow layer. The type of soil, the steepness and length of the slope, and the degree of past erosion determine the type of conservation practices needed in sloping areas of cropland. Conservation practices may include no-till cropping systems, reduced tillage cropping systems, terraces, contour farming, and contour stripcropping.

On many of the soils on flood plains in the county, main and lateral ditches and surface field ditches (with or without overfall pipes or drop pipes) are needed to help remove excess surface water. Grade stabilization structures are also needed to safely remove surface water from some fields. Diversions are needed in many fields on flood plains to protect the soils from surface runoff from adjoining, upland slopes. Annemaine, Atmore, Croatan, Jena, Latonia, Johnston, Nugent, and Smithton soils are examples of soils on flood plains. Where the poorly drained Atmore and Smithton soils and the very poorly drained Croatan and Johnston soils have been abandoned to native wetland vegetation, they should be left as wetlands.

The major forage crops in the county are bahiagrass, common bermudagrass, improved bermudagrass, dallisgrass, and ryegrass. Legumes, such as white clover, red clover, and crimson clover, are sometimes grown in combination with grasses. The Natural Resources Conservation Service or the Cooperative Extension Service can be contacted for assistance in the selection of the best species of grasses or legumes for a particular soil.

Management practices needed for forages and pastures include rotational grazing and the maintenance of a minimum grazing height of 2 to 3 inches. Proper applications of lime and fertilizer can increase forage production.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of map units in this survey area is given in the section “Detailed Soil Map Units” and in the yields table.

Forestland Management and Productivity

Paul Dillard, forester, Natural Resources Conservation Service, helped to prepare this section.

About 85 percent of Stone County, or more than 243,000 acres, is commercial forestland. The county supports five major forest types. The approximate extent of each forest type is: longleaf-slash pine, 41 percent; loblolly-shortleaf pine, 18 percent; oak-pine, 17 percent; oak-hickory, 11 percent; and oak-gum-cypress, 13 percent. About 53 percent of the woodland is owned by farmers and other non-industrial private owners, 22 percent is owned by the forest industry, and 17 percent is in public ownership.

Good forestland management maintains or enhances soil productivity and water quality. The management activities that have the greatest potential to adversely affect soil productivity and water quality are timber harvesting and site preparation for future tree crops. Poor management of these practices can cause erosion, nutrient depletion, and soil compaction. Site-specific forestland management prescriptions that consider topography, erosion, time of year, and natural site fertility are the best way to prevent damage to soil and water resources.

Grazing is a suitable secondary use for much of the forestland in the county. The grasses, legumes, forbs, and many of the woody plants in the understory can be utilized for forage. Stocking the proper number of grazing animals for the amount of forage produced prevents damage to desirable tree species.

Table 6 can help forest owners or managers plan the use of soils for wood crops. It shows the potential productivity of the soils for wood crops and rates the soils according to the limitations that affect various aspects of forest management.

In the table, *slight, moderate,* and *severe* indicate the degree of the major soil limitations to be considered in management.

Erosion hazard is the probability that damage will occur as a result of site preparation and cutting where the soil is exposed along roads, skid trails, and fire lanes and in log-handling areas. Forests that have been burned or overgrazed are also subject to erosion. Ratings of the erosion hazard are based on the percent of the slope. A rating of *slight* indicates that no particular prevention measures are needed under ordinary conditions. A rating of *moderate* indicates that erosion-control measures are needed in certain silvicultural activities. A rating of *severe* indicates that special precautions are needed to control erosion in most silvicultural activities.

Equipment limitation reflects the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. The chief characteristics and conditions considered in the ratings are slope, stones on the surface, rock outcrops, soil wetness, and texture of the surface layer. A rating of *slight* indicates that under normal conditions the kind of equipment and season of use are not significantly restricted by soil factors. Soil wetness can restrict equipment use, but the wet period does not exceed 1 month. A rating of *moderate* indicates that equipment use is moderately restricted because of one or more soil factors. If the soil is wet, the wetness restricts equipment use for a period of 1 to 3 months. A rating of *severe* indicates that equipment use is severely restricted either as to the kind of equipment that can be used or the season of use. If the soil is wet, the wetness restricts equipment use for more than 3 months.

Seedling mortality refers to the death of naturally occurring or planted tree seedlings, as influenced by the kinds of soil, soil wetness, or topographic conditions. The factors used in rating the soils for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, effective rooting depth, and slope aspect. A rating of *slight* indicates that seedling mortality is not likely to be a problem under normal conditions. Expected mortality is less than 25 percent. A rating of *moderate* indicates that some problems from seedling mortality can be expected. Extra precautions are advisable. Expected mortality is 25 to 50 percent. A rating of *severe* indicates that seedling mortality is a serious problem. Extra precautions are important. Replanting may be necessary. Expected mortality is more than 50 percent.

Windthrow hazard is the likelihood that trees will be uprooted by the wind because the soil is not deep enough for adequate root anchorage. The main restrictions that affect rooting are a seasonal high water table and the depth to bedrock, a fragipan, or other limiting layers. A rating of *slight* indicates that under normal conditions no trees are blown down by the wind. Strong winds may damage trees, but they do not uproot them. A rating of *moderate* indicates that some trees can be blown down during periods when the soil is wet and winds are moderate or strong. A rating of *severe* indicates that many trees can be blown down during these periods.

Plant competition ratings indicate the degree to which undesirable species are expected to invade and grow when openings are made in the tree canopy. The main factors that affect plant competition are depth to the water table and the available water capacity. A rating of *slight* indicates that competition from undesirable plants is not likely to prevent natural regeneration or suppress the more desirable species. Planted seedlings can become established without undue competition. A rating of *moderate* indicates that competition may delay the establishment of desirable species. Competition may hamper stand development, but it will not prevent the eventual development of fully stocked stands. A rating of *severe* indicates that competition can be expected to prevent regeneration unless precautionary measures are applied.

In the table *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged,

unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Recreation

The soils of the survey area are rated in table 7a and table 7b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 7a and 7b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Table 7a

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth

of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding permeability. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Table 7b

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate

vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 8, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and grain sorghum.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, bahiagrass, lespedeza, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are ragweed, goldenrod, beggarweed, Johnsongrass, and partridge pea.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, yellow poplar, black cherry, sweetgum, sumac, hawthorn, dogwood, hickory, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are autumn-olive and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, red cedar, and bald cypress.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness,

reaction and slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, pond weed, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, beaver ponds, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, mourning dove, meadowlark, field sparrow, cottontail, and red fox.

Habitat for forestland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, raccoon, muskrat, mink, otter, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways,

pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 9a and table 9b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Table 9a

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil

properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Table 9b

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Table 10a and table 10b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation.

Fair performance and moderate maintenance can be expected. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

Table 10a

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, and flooding affect absorption of the effluent. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, flooding, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause

construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Table 10b

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Table 11a and table 11b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Table 11a

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of gravel or sand are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains gravel or sand, the soil is considered a likely source regardless of thickness. The assumption is that the gravel or sand layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of gravel and sand. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

Table 11b

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by depth to a water table and by slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 12a and table 12b give information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Moderately limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Limited* indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but overcoming them generally requires special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate or high maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The numerical ratings are shown as decimal fractions ranging from 0.00 to 1.00. Limitation classes are assigned as follows:

Not limited	0.00
Slightly limited	0.01 to 0.30
Moderately limited	0.31 to 0.60
Limited	0.61 to 0.99
Very limited	1.00

The numerical ratings used to express the severity of individual limitations indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation.

Limitation class terms and numerical ratings are shown for each limiting soil feature listed. As many as three soil features may be listed for each component. The overall limitation rating for the component is based on the most severe limitation.

Table 12a

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, permeability, depth to a water table, ponding, slope, and flooding. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or a cemented pan, large stones, slope, and the likelihood that cutbanks will cave. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. The availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to a water table, ponding, flooding, available water capacity, intake rate, permeability, erodibility, and slope. The construction of a system is affected by large stones and depth to bedrock. The performance of a system is affected by the depth of the root zone, reaction, and the amount of salts, sodium, sulfur, lime, or gypsum.

Table 12b

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, a water table, ponding, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, erodibility, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, a water table, slope, and depth to bedrock affect the construction of grassed waterways. Erodibility, soil moisture regime, available water capacity, restricted rooting depth, restricted permeability, and toxic substances, such as salts and sodium, affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

Table 13 gives the engineering classifications and the range of properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

Table 14 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^{1}/_{3}$- or $^{1}/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

The term *permeability,* as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). Saturated hydraulic conductivity refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3 percent, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook,” which

is available in local offices of the Natural Resources Conservation Service or on the Internet.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Soil Features

Table 15 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Water Features

Table 16 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils

of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top *(upper limit)* and base *(lower limit)* of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2006). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 17 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udult (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludults (*Hapl*, meaning minimal horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludults (Buol, Hole, and McCracken, 1980).

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, siliceous, subactive, thermic Typic Hapludults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The Smithdale series is an example.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in

the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2006). Unless otherwise indicated, colors in the descriptions are for moist soil. In some pedons, the extent of the colors indicated in the matrix for a horizon does not total 100 percent. In these horizons, mottles make up the remaining extent. Following the pedon description is the range of important characteristics of the soils in the series.

Annemaine Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Stratified clayey and loamy marine sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

- Loamy Harleston soils, which are in the slightly higher, more convex positions
- Well drained, loamy Jena soils, which are in the slightly lower positions on narrow flood plains
- Well drained, loamy Latonia soils, which are in the slightly higher, more convex positions
- Excessively drained, sandy Nugent soils, which are in the slightly lower positions on narrow flood plains

Typical Pedon

Annemaine loam, occasionally flooded; 0.6 mile east of Black Creek on State Highway 26, about 0.5 mile south of the highway, in a wooded area; NE$^{1}/_{4}$NE$^{1}/_{4}$ sec. 29, T. 2 S., R. 9 W.

A—0 to 5 inches; dark brown (10YR 3/3) loam; weak medium granular structure; friable; many fine and medium roots; strongly acid; abrupt smooth boundary.

E—5 to 11 inches; brown (10YR 5/3) loam; weak fine subangular blocky structure; friable; few fine roots; common fine pores; strongly acid; abrupt smooth boundary.

Bt1—11 to 30 inches; yellowish red (5YR 5/6) clay loam; moderate fine and medium subangular blocky structure; firm; common fine and medium roots; common fine pores; common distinct clay films on faces of peds and in pores; very strongly acid; gradual wavy boundary.

Bt2—30 to 38 inches; yellowish red (5YR 5/8) clay loam; moderate fine and medium subangular blocky structure; firm; few fine and medium roots; common faint clay films on faces of peds; many medium faint red (2.5YR 4/8) irregularly shaped masses of iron accumulation with diffuse boundaries in the matrix; common medium prominent pale brown (10YR 6/3) and light gray (10YR 7/2) irregularly shaped iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

BC—38 to 47 inches; 40 percent yellowish red (5YR 5/8) and 35 percent red (2.5YR 4/8) clay loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; common medium prominent light gray (10YR 7/2) irregularly shaped iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

C—47 to 60 inches; 40 percent red (2.5YR 4/8), 30 percent light yellowish brown (10YR 6/4), and 30 percent dark gray (10YR 4/1) sandy loam; massive; friable; few fine flakes of mica; few medium black concretions (iron and manganese oxides); grayish areas are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3
Texture—loam

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 3 or 4
Texture—loam or fine sandy loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—clay loam, silty clay, or clay
Redoximorphic features—iron depletions in shades of brown and gray and masses of iron accumulation in shades of red and brown

BC horizon (where present):
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy clay loam, loam, or clay loam
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red and brown

C horizon:
Color—multicolored in shades of red, yellow, brown, and gray
Texture—sandy loam or fine sandy loam
Redoximorphic features—dark colored iron concretions; iron depletions in shades of gray and masses of iron accumulation in shades of red and brown

Atmore Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy sediments (Soil Survey Division Staff, 1993)
Landscape: Coastal Plain
Landform: Depressions and interstream divides
Landform position: Flat to concave
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleaquults

Commonly Associated Soils

- Somewhat poorly drained, loamy Escambia and moderately well drained, loamy over clayey Saucier soils, which are in the slightly higher, convex positions
- Loamy Smithton soils, which are on narrow flood plains

Typical Pedon

Atmore loam; in Stone County, Mississippi; 4.2 miles east of the town of McHenry on a county road to an intersection, south 1.5 miles on the county road, 0.75 mile east

on a U.S. Forest Service road, then 200 feet north of the road, in a wooded area; NW¼SE¼ sec. 24, T. 4 S., R. 11 W.

A—0 to 8 inches; dark gray (10YR 4/1) loam; weak fine granular structure; friable; common fine roots; common medium faint very dark gray (10YR 3/1) irregularly shaped iron depletions with diffuse boundaries lining old root channels; extremely acid; clear smooth boundary.

Eg—8 to 16 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; friable; few fine roots; common fine faint brown (10YR 5/3) irregularly shaped masses of iron accumulation with diffuse boundaries in the matrix; extremely acid; clear smooth boundary.

Bg/Eg—16 to 32 inches; light brownish gray (10YR 6/2) loam (B); weak medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; tongues of grayish brown (10YR 5/2) fine sandy loam (E) on vertical faces of peds; common medium distinct yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; extremely acid; gradual wavy boundary.

Btvg1—32 to 50 inches; light brownish gray (10YR 6/2) loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few thin clay films on faces of peds; 20 percent, by volume, firm plinthite segregations; common medium distinct yellowish brown (10YR 5/6) and common medium prominent red (2/5YR 4/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Btvg2—50 to 65 inches; 40 percent gray (10YR 6/1), 30 percent yellowish brown (10YR 5/6), and 20 percent light brownish gray (10YR 6/2) clay loam; weak medium subangular blocky structure; friable; clay bridges between sand grains; common faint clay films on faces of peds; 10 percent, by volume, firm plinthite segregations; many medium prominent red (10R 4/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Content of concretions: None to common; mostly iron and manganese

Content of plinthite segregations: 5 to 20 percent in the Btvg horizon between depths of 24 and 60 inches

Reaction: Extremely acid to strongly acid throughout, except where lime has been applied

A horizon:

Color—hue of 10YR, 2.5Y, or 5Y, value of 2 to 4, and chroma of 1 or 2

Texture—loam

Redoximorphic features—iron depletions in shades of brown and gray and masses iron accumulation in shades of red

Eg and Bg/Eg horizons:

Color—hue of 10YR, 2.5Y, or 5Y, value of 4 to 7, and chroma of 1 or 2

Texture—fine sandy loam, loam, or silt loam

Redoximorphic features—iron or clay depletions in shades of brown and gray and masses of iron accumulation in shades of red and brown

Btvg horizon:

Color—hue of 10YR, 2.5Y, or 5Y, value of 4 to 7, and chroma of 1 or 2; or multicolored in shades of gray, yellow, and brown

Texture—loam, sandy loam, or silt loam in the upper part; loam, silt loam, silty clay loam, or clay loam in the lower part

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red and brown

Benndale Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands and high terraces
Landform position: Slightly convex slopes
Slope: 2 to 12 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Paleudults

Commonly Associated Soils

- Somewhat poorly drained Escambia soils, which are in the slightly lower positions
- Moderately well drained Malbis and Poarch soils, which are in positions similar to those of the Benndale soils or slightly higher
- McLaurin soils, which are in the higher positions
- Smithdale soils, which are in positions similar to those of the Benndale soils

Typical Pedon

Benndale fine sandy loam, 2 to 5 percent slopes; 1.4 miles west of the town of Bond on a county road and 140 feet south of the road, in a wooded area; SW$^1/_4$NW$^1/_4$ sec. 10, T. 2 S., R. 12 W.

A—0 to 5 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; very strongly acid; clear smooth boundary.
E—5 to 11 inches; brown (10YR 5/3) sandy loam; weak fine granular structure; friable; few fine roots; very strongly acid; clear wavy boundary.
Bt1—11 to 22 inches; strong brown (7.5YR 5/6) loam; weak fine granular structure; friable; few fine roots; sand grains coated and bridged with clay; very strongly acid; clear wavy boundary.
Bt2—22 to 32 inches; yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; very strongly acid; clear wavy boundary.
Bt3—32 to 42 inches; yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; few fine prominent red (2.5YR 4/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; very strongly acid; clear wavy boundary.
Bt4—42 to 62 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few faint clay films on faces of peds; common medium distinct brownish yellow (10YR 6/8) and few fine faint light yellowish brown (10YR 6/4) masses of iron accumulation; common medium prominent red (2.5YR 4/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid to strongly acid throughout, except where lime has been applied

A horizon (where present):
Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 3
Texture—fine sandy loam

Ap horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4
Texture—fine sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, loam, or loamy sand

Bt horizon:
Color—hue of 7.5YR, 10YR, or 2.5Y, value of 5 or 6, and chroma of 4 to 8; or multicolored in shades of red, gray, and strong brown in the lower part
Texture—loam, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features (where present)—few to many masses of iron accumulation in shades of red or brown

Croatan Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderate
Parent material: Highly decomposed organic material underlain by loamy alluvium
Landscape: Coastal Plain
Landform: Drainageways
Landform position: Concave slopes
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, dysic, thermic Terric Halosaprists

Commonly Associated Soils

- Mucky, loamy Johnston soils, which are in positions similar to those of the Croatan soils
- Poorly drained, mineral Smithton soils, which are on low terraces, in broad depressions, on flood plains, and in drainageways
- Scattered areas of very poorly drained organic soils that are 35 to 60 inches deep to mineral material

Typical Pedon

Croatan muck in an area of Johnston and Croatan soils, frequently flooded; 1.25 miles southwest of Magnolia School on old State Highway 26 and 200 feet from the road; NW$^{1}/_{4}$NE$^{1}/_{4}$ sec. 16, T. 3 S., R. 13 W.

Oa1—0 to 7 inches; very dark grayish brown (10YR 3/2) muck; 10 percent fiber unrubbed; massive; friable; fibers are of leaves, roots, bark, and twigs; many fine and medium roots; extremely acid; gradual wavy boundary.
Oa2—7 to 30 inches; very dark gray (10YR 3/1) muck; 25 percent fiber unrubbed, less than 3 percent rubbed; woody fibers remain after rubbing; massive; friable; few fine roots; common fragments of partially decomposed roots and limbs; extremely acid; clear wavy boundary.
2Ag—30 to 40 inches; dark grayish brown (10YR 4/2) sandy loam; massive; friable; very strongly acid; gradual wavy boundary.
2Cg—40 to 60 inches; gray (10YR 6/1) sandy loam; massive; friable; few fine distinct dark yellowish brown (10YR 3/4) irregularly shaped masses of iron accumulation with clear boundaries in the matrix.

Range in Characteristics

Thickness of the solum: 16 to 51 inches
Reaction: Extremely acid to strongly acid throughout

O horizon:
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3
Texture—muck with fiber content of 3 to 30 percent unrubbed and less than 10 percent rubbed

2Ag horizon (where present):
Color—hue of 7.5YR, 10YR, or 2.5Y, value of 2 to 7, and chroma of 1 to 3
Texture—sandy loam, mucky fine sandy loam, loam, or fine sandy loam

2Cg horizon:
Color—hue of 10YR, 2.5Y, 5Y, or neutral, value of 4 to 7, and chroma of 0 or 1
Texture—loam, sandy loam, sandy clay loam, or silty clay loam
Redoximorphic features—few to many masses of iron accumulation in shades of brown and red

Escambia Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands, summits of broad ridges
Landform position: Flat to slightly concave slopes
Slope: 0 to 5 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults

Commonly Associated Soils

- Well drained Benndale soils, which are in the slightly higher, more convex positions
- Moderately well drained Malbis and Poarch soils, which are in the slightly higher positions
- Poorly drained Smithton soils, which are in narrow drainageways

Typical Pedon

Escambia fine sandy loam, 0 to 2 percent slopes; 3.0 miles south of the town of Wiggins on U.S. Highway 49, about 0.5 mile east on a county road, and 50 feet south of the road, in a wooded area; NW$^{1}/_{4}$NW$^{1}/_{4}$ sec. 7, T. 3 S., R. 11 W.

A—0 to 4 inches; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear smooth boundary.

E—4 to 8 inches; brown (10YR 5/3) fine sandy loam; weak fine granular structure; friable; many fine roots; few fine faint dark grayish brown (10YR 4/2) organic stains with diffuse boundaries in root channels; strongly acid; abrupt smooth boundary.

Bt—8 to 17 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; few fine roots; few medium distinct light gray (10YR 7/2) irregularly shaped clay depletions with clear boundaries on vertical faces of peds; common medium distinct strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; clear wavy boundary.

Btv1—17 to 23 inches; light yellowish brown (10YR 6/4) loam; weak medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; 5 percent, by volume, firm plinthite masses; common coarse distinct strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; few fine faint light brownish gray (10YR 6/2) irregularly shaped iron depletions with diffuse boundaries in the matrix; strongly acid; gradual wavy boundary.

Btv2—23 to 33 inches; 40 percent light brownish gray (10YR 6/2), 30 percent pale brown (10YR 6/3), and 25 percent strong brown (7.5YR 5/8) loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; 6 percent, by volume, firm plinthite masses; grayish areas are iron depletions, and strong brown areas are masses of iron accumulation; strongly acid; gradual wavy boundary.

Btv3—33 to 44 inches; 40 percent light brownish gray (10YR 6/2), 25 percent yellowish brown (10YR 5/8), and 20 percent dark grayish brown (10YR 4/2) loam; weak medium subangular blocky structure; friable; few fine faint clay films on faces of peds; 8 percent, by volume, firm plinthite masses; common medium distinct strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; grayish areas are iron depletions; strongly acid; gradual wavy boundary.

Btv4—44 to 58 inches; 35 percent strong brown (7.5YR 5/8), 30 percent brownish yellow (10YR 6/8), and 25 percent light brownish gray (10YR 6/2) fine sandy loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; 3 percent, by volume, firm plinthite masses; common medium distinct light gray (10YR 7/1) irregularly shaped iron depletions with clear boundaries in the matrix; strong brown areas are masses of iron accumulation; very strongly acid; clear wavy boundary.

B´t—58 to 62 inches; 45 percent strong brown (7.5YR 5/8) and 40 percent light yellowish brown (10YR 6/4) loam; moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; common lenses of dark grayish brown (10YR 4/2) sandy clay loam; common medium distinct light gray (10YR 7/1) irregularly shaped iron depletions with clear boundaries in the matrix; common medium distinct yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Content of plinthite segregations: Less than 15 percent, by volume, in the B horizon

Reaction: Extremely acid to very strongly acid throughout the profile, except where lime has been applied

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2

Texture—fine sandy loam

E or EB horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 or 3

Texture—loam or fine sandy loam

Redoximorphic features (where present)—few or common masses of iron accumulation in shades of brown

Bt horizon:

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 or 4 in the upper part; hue of 10YR, 2.5Y, or 5Y, value of 5 to 7, and chroma of 1 to 6 in the lower part

Texture—fine sandy loam, loam, or silt loam in the upper part; fine sandy loam, loam, or sandy clay loam in the lower part
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red and brown

Eustis Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Parent material: Sandy sediments
Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Summits, shoulders, and backslopes
Slope: 12 to 17 percent
Taxonomic class: Siliceous, thermic Psammentic Paleudults

Commonly Associated Soils

- Well drained Lucedale, McLaurin, and Ruston soils, which are in the slightly higher positions
- Sandy Troup soils, which are on the lower hillslopes

Typical Pedon

Eustis loamy sand, 12 to 17 percent slopes; 0.75 mile east of the town of Wiggins on State Highway 26 and about 800 feet south of the road, in a wooded area; NW1/4 NW1/4 sec. 26, T. 2 S., R. 12 W.

A—0 to 5 inches; dark gray (10YR 4/1) loamy sand; weak fine granular structure; very friable; common fine and medium roots; very strongly acid; clear smooth boundary.
E—5 to 14 inches; dark grayish brown (10YR 4/2) loamy fine sand; single grain; loose; few fine roots; very strongly acid; gradual wavy boundary.
Bt1—14 to 32 inches; strong brown (7.5YR 5/6) loamy fine sand; weak fine and medium granular structure; very friable; few fine roots; sand grains coated and bridged with clay; strongly acid; gradual wavy boundary.
Bt2—32 to 42 inches; light yellowish brown (10YR 6/4) loamy fine sand; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation; weak medium granular structure; friable; sand grains coated and bridged with clay; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Bt3—42 to 62 inches; pale brown (10YR 6/3) loamy fine sand; weak fine granular structure; friable; few sand grains bridged with clay; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3
Texture—loamy sand

E horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—sand, fine sand, or loamy fine sand

Bt horizon:
Color—hue of 5YR, 7.5YR, or 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—loamy sand or loamy fine sand; content of clay ranges from 10 to 15 percent
Redoximorphic features—few or common masses of iron accumulation in shades of brown and red

Harleston Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Aquic Paleudults

Commonly Associated Soils

- Well drained Benndale soils, which are on uplands
- Somewhat poorly drained Escambia soils, which are on broad, upland flats
- Well drained Malbis soils, which are in convex positions similar to those of the Harleston soils
- Plinthic Poarch and Saucier soils, which are on uplands
- Poorly drained Smithton soils, which are in narrow drainageways

Typical Pedon

Harleston fine sandy loam, occasionally flooded; 2.5 miles west of the town of Wiggins on Project Road and 30 feet left of the road, in a wooded area; NE¼NW¼ sec. 21, T. 2 S., R. 12 W.

A—0 to 5 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; very friable; many fine roots; very strongly acid; clear smooth boundary.
E—5 to 11 inches; brown (10YR 5/3) sandy loam; moderate medium granular structure; friable; common fine roots; very strongly acid; clear smooth boundary.
Bt1—11 to 25 inches; light yellowish brown (2.5Y 6/4) loam; moderate medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; very strongly acid; gradual smooth boundary.
Bt2—25 to 35 inches; light olive brown (2.5Y 5/4) loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; few fine distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions with clear boundaries in the matrix; very strongly acid; gradual smooth boundary.
Bt3—35 to 44 inches; light olive brown (2.5Y 5/4) loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; few faint clay films on faces of peds; common medium distinct yellowish brown (10YR 5/4) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions with clear boundaries in the matrix; extremely acid; gradual irregular boundary.
Bt4—44 to 52 inches; 35 percent light yellowish brown (2.5Y 6/4), 30 percent light olive brown (2.5Y 5/4), and 25 percent yellowish brown (10YR 5/6) sandy loam; moderate medium subangular blocky structure; friable; sand grains coated and

bridged with clay; many medium distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Bt5—52 to 62 inches; 40 percent light brownish gray (10YR 6/2), 30 percent light yellowish brown (10YR 6/4), and 25 percent yellowish brown (10YR 5/8) sandy loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; grayish areas are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:

Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3

Texture—fine sandy loam

E horizon:

Color—hue of 10YR, value of 4 to 6, and chroma of 2 to 4

Texture—loam, sandy loam, or fine sandy loam

Bt horizon:

Color—hue of 7.5YR, 10YR, or 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam or loam in the upper part; sandy loam, loam, or sandy clay loam in the lower part

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, and red

Jena Series

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Parent material: Loamy alluvium

Landscape: Coastal Plain

Landform: Flood plains

Landform position: Flat to slightly convex positions on the lower parts of natural levees

Slope: 0 to 2 percent

Taxonomic class: Coarse-loamy, siliceous, active, thermic Fluventic Dystrudepts

Commonly Associated Soils

- Clayey Annemaine soils, which are on remnants of low terraces
- Poorly drained Smithton soils, which are in narrow drainageways
- Scattered areas of soils that are similar to the Jena soils but are moderately well drained

Typical Pedon

Jena loam in an area of Jena-Nugent complex, frequently flooded; 5 miles south of Paramount Church and 150 feet north of Red Creek; $SW^1/_4NE^1/_4$ sec. 28, T. 3 S., R. 10 W.

A—0 to 3 inches; dark grayish brown (10YR 4/2) loam; weak medium granular structure; very friable; many fine and medium roots; strongly acid; abrupt smooth boundary.

Bw1—3 to 7 inches; brown (10YR 5/3) very fine sandy loam; weak fine subangular

blocky structure; friable; common fine and medium roots; strongly acid; clear smooth boundary.
Bw2—7 to 17 inches; brown (10YR 4/3) very fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; very strongly acid; gradual wavy boundary.
Bw3—17 to 35 inches; brown (10YR 5/3) very fine sandy loam; weak medium subangular blocky structure; friable; strongly acid; gradual wavy boundary.
Bw4—35 to 38 inches; light yellowish brown (10YR 6/4) very fine sandy loam; weak medium subangular blocky structure; friable; common coarse faint brown (10YR 6/3) iron depletions; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
C—38 to 60 inches; light yellowish brown (10YR 6/4) loamy fine sand; single grain; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 65 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—loam

Bw horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 3 to 6; hue of 10YR, value of 6, and chroma of 3 or 4; or hue of 7.5YR, value of 5, and chroma of 6
Texture—very fine sandy loam, fine sandy loam, or sandy loam

C horizon:
Color—hue of 10YR or 7.5YR, value of 5 or 6, and chroma of 3 to 6; or it has a dominant matrix and is multicolored in shades of gray and brown in the lower part.
Texture—fine sandy loam, loamy fine sand, or sandy loam

Johnston Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderately rapid
Parent material: Loamy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Concave slopes
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts (Soil Survey Staff, 1999)

Commonly Associated Soils

- Poorly drained, mineral Smithton soils, which are on low terraces, in broad depressions, on flood plains, and in drainageways
- Scattered areas of very poorly drained organic soils that are 35 to 60 inches deep to mineral material

Typical Pedon

Johnston mucky loam, in an area of Johnston and Croatan soils, frequently flooded; 1.5 miles south on State Highway 15 from the intersection of State Highways 26 and

15, about 200 feet east of the road, in a wooded area; NW¼SE¼ sec. 27, T. 2 S., R. 10 W.

A1—0 to 15 inches; black (5Y 2/1) mucky loam; massive; friable; few fine and medium roots; very strongly acid; clear wavy boundary.
A2—15 to 40 inches; very dark gray (10YR 3/1) mucky loam; massive; friable; few fine roots; very strongly acid; abrupt smooth boundary.
Cg1—40 to 55 inches; gray (N 4/0 or 5/0) sandy loam; massive; very friable; common lenses of light gray (10YR 7/2) loamy sand; strongly acid; gradual smooth boundary.
Cg2—55 to 60 inches; dark gray (10YR 4/1) sandy loam; massive; very friable; common lenses of light gray (10YR 7/2) loamy sand; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to more than 40 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 10YR, 2.5Y, or 5Y, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3
Texture—mucky loam

Cg horizon:
Color—hue of 10YR to neutral, value of 4 to 7, and chroma of 0 to 2
Texture—loam or sandy loam in the upper part; sandy loam, loamy sand, or sand in the lower part

Latonia Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Parent material: Marine sediments
Landscape: Coastal Plain
Landform: Marine terraces and stream terraces
Landform position: Slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Moderately well drained Annemaine soils, which are on low stream terraces and flood plains
- Benndale and McLaurin soils, which are in the higher positions
- Moderately well drained Harleston soils, which are in the slightly lower positions

Typical Pedon

Latonia fine sandy loam, occasionally flooded; 2.0 miles west of Ramsey Springs and 0.25 mile north of Red Creek, in a wooded area; NE¼NW¼ sec. 24, T. 3 S., R. 10 W.

A—0 to 6 inches; brown (10YR 5/3) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; strongly acid; abrupt smooth boundary.
Bt1—6 to 18 inches; yellowish brown (10YR 5/8) loam; weak fine subangular blocky structure; friable; common fine and medium roots; sand grains coated and bridged with clay; very strongly acid; clear smooth boundary.
Bt2—18 to 26 inches; strong brown (7.5YR 5/6) loam; weak medium subangular

blocky structure; friable; few fine roots; few faint clay films on faces of peds; sand grains coated and bridged with clay; very strongly acid; gradual wavy boundary.
Bt3—26 to 35 inches; yellowish brown (10YR 5/8) loam; weak fine and medium subangular blocky structure; friable; few faint clay films on faces of peds; sand grains coated and bridged with clay; strongly acid; abrupt smooth boundary.
2C1—35 to 48 inches; brownish yellow (10YR 6/6) loamy sand; single grain; loose; very strongly acid; gradual wavy boundary.
2C2—48 to 56 inches; brownish yellow (10YR 6/6) loamy sand; few fine distinct yellowish brown (10YR 5/8) iron accumulations; single grain; loose; few pebbles; few fine distinct light gray (10YR 7/2) irregularly shaped iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.
2C3—56 to 60 inches; light yellowish brown (2.5Y 6/4) sand; many medium faint pale yellow (2.5Y 7/4) iron depletions; single grain; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 45 inches
Content and size of rock fragments: Less than 5 percent, by volume, in the C horizon; mostly pebbles
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 or 3
Texture—fine sandy loam

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 3 to 5
Texture—sandy loam or fine sandy loam

Bt horizon:
Color—hue of 7.5YR, value of 4 or 5, and chroma of 4 to 6; or hue of 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or loam

2C horizon:
Color—variable, in shades ranging from white to yellowish brown
Texture—loamy sand or sand
Redoximorphic features—iron or clay depletions in shades of gray

Lucedale Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy sediments
Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Planar or slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Rhodic Paleudults

Commonly Associated Soils

- Somewhat excessively drained, sandy Eustis soils, which are in the slightly lower positions
- Loamy McLaurin and Ruston soils, which are in positions similar to those of the Lucedale soils and have moist color values of 4 or more throughout the solum

Typical Pedon

Lucedale loam, 0 to 2 percent slopes; 7.5 miles east of the town of Wiggins on State Highway 26, about 800 feet north of the highway, and 20 feet east of a field road, in a cultivated field; SE$^1/_4$SW$^1/_4$ sec. 19, T. 2 S., R. 10 W.

Ap—0 to 7 inches; dark brown (7.5YR 3/2) loam; weak fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.
Bt1—7 to 22 inches; dark red (2.5YR 3/6) sandy clay loam; weak medium subangular blocky structure; friable; many fine roots; few faint clay films on faces of peds; strongly acid; gradual wavy boundary.
Bt2—22 to 45 inches; dark red (10R 3/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; few medium pockets of brown sand; strongly acid; gradual wavy boundary.
Bt3—45 to 72 inches; dark red (10R 3/6) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; 2 percent, by volume, quartz pebbles; strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Content and size of rock fragments: Less than 5 percent, by volume, in the C horizon; mostly pebbles
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

Ap horizon:
Color—hue of 5YR or 7.5YR, value of 3, and chroma of 2 to 4
Texture—loam

Bt horizon:
Color—hue of 2.5YR, value of 3, and chroma of 4 to 6 in the upper part; hue of 2.5YR or 10R, value of 3, and chroma of 4 to 6 in the lower part
Texture—sandy clay loam or loam; 20 to 30 percent clay and 20 to 38 percent silt in the upper part

Lucy Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Sandy and loamy sediments
Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Convex slopes
Slope: 2 to 5 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Kandiudults
Taxadjunct statement: The Lucy soils in Stone County are taxadjuncts because they do not have a kandic horizon. In this survey area, the Lucy soils are loamy, siliceous, subactive, thermic Arenic Paleudults.

Commonly Associated Soils

- Somewhat excessively drained Eustis soils, which are on the steeper upland hillsides and have a sandy control section
- McLaurin soils, which have a bisequum and are sandier than the Lucy soils
- Ruston soils, which have a bisequum and are less sandy than the Lucy soils

- Somewhat excessively drained Troup soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 79 inches

Typical Pedon

Lucy loamy sand, 2 to 5 percent slopes; 300 feet west of U.S. Highway 49 on a county road, about 30 feet south of the road, in a wooded area; NE$^1/_4$NW$^1/_4$ sec. 26, T. 2 S., R. 12 W.

A—0 to 7 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary.
E—7 to 22 inches; yellowish brown (10YR 5/8) loamy sand; weak fine granular structure; very friable; few fine roots; strongly acid; gradual wavy boundary.
BE—22 to 28 inches; strong brown (7.5YR 5/6) sandy loam; weak fine and medium subangular blocky structure; very friable; few fine roots; sand grains coated and bridged with clay; strongly acid; gradual wavy boundary.
Bt1—28 to 40 inches; yellowish red (5YR 5/8) sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; strongly acid; gradual wavy boundary.
Bt2—40 to 50 inches; yellowish red (5YR 5/8) sandy clay loam; few fine distinct light yellowish brown (10YR 6/4) mottles; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; 2 percent, by volume, quartz pebbles; strongly acid; gradual wavy boundary.
Bt3—50 to 62 inches; red (2.5YR 4/8) sandy clay loam; common medium distinct strong brown (7.5YR 5/6) and light yellowish brown (10YR 6/4) mottles; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; 3 percent, by volume, quartz pebbles; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: Less than 5 percent, by volume, in the lower part of the Bt horizon; mostly pebbles
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 2 or 3
Texture—loamy sand

E horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 7, and chroma of 3 to 8
Texture—loamy sand, loamy fine sand, or sand

BE horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy loam

Bt horizon:
Color—hue of 5YR or 2.5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy loam or sandy clay loam in the upper part; sandy clay loam or clay loam in the lower part

Malbis Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow

Parent material: Loamy sediments
Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Concave slopes
Slope: 2 to 8 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Plinthic Paleudults

Commonly Associated Soils

- Well drained Benndale and loamy Poarch soils, which are in landscape positions similar to those of the Malbis soils
- Somewhat poorly drained Escambia soils, which are in the slightly lower positions
- Saucier soils, which are on adjacent upland ridges and hillslopes, have mottles with chroma of 2 or less within a depth of 30 inches, and are clayey in the lower part of the subsoil

Typical Pedon

Malbis fine sandy loam, undulating; 4.2 miles east of the town of McHenry on a county road to an intersection, 1.5 miles south on a county road, 0.5 mile east on a U.S. Forest Service road, 1,000 feet north on a road, and 75 feet west of the road, in a wooded area; SE$^{1}/_{4}$NW$^{1}/_{4}$ sec. 24, T. 4 S., R. 11 W.

A—0 to 5 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary.

E—5 to 12 inches; light yellowish brown (10YR 6/4) fine sandy loam; few fine faint yellowish brown (10YR 5/6) mottles; weak fine granular structure; very friable; common fine and medium roots; strongly acid; gradual smooth boundary.

Bt—12 to 28 inches; yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; strongly acid; clear wavy boundary.

Btv1—28 to 35 inches; strong brown (7.5YR 5/8) loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; 5 percent, by volume, firm plinthite segregations; few fine distinct yellowish red (5YR 5/8) and brownish yellow (10YR 6/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; gradual wavy boundary.

Btv2—35 to 44 inches; strong brown (7.5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; 5 percent, by volume, firm plinthite segregations; few fine distinct light yellowish brown (10YR 6/4) and brownish yellow (10YR 6/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; clear wavy boundary.

Btv3—44 to 50 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; 6 percent, by volume, firm plinthite segregations; common medium distinct brownish yellow (10YR 6/6) and yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; few fine distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions with clear boundaries in the matrix; strongly acid; gradual wavy boundary.

Btv4—50 to 62 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; 6 percent, by volume, plinthite segregations; common medium distinct strong brown (7.5YR 5/8) and few faint distinct red (2.5YR 4/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; common medium distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions with clear boundaries in the matrix; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content of plinthite segregations: 5 to 25 percent, by volume, in the Btv horizon
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 or 3
Texture—fine sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 or 4
Texture—fine sandy loam or loam

BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 8
Texture—loam, sandy clay loam, or clay loam

Bt horizon:
Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 4 to 8
Redoximorphic features (where present)—few to many accumulations in shades of brown or yellow
Texture—loam, sandy clay loam, or clay loam; 22 to 33 percent clay and 20 to 45 percent silt in the upper 20 inches

Btv horizon:
Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam, sandy clay loam, or clay loam
Redoximorphic features—few to many iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, and red

McLaurin Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Broad upland ridges and side slopes
Landform position: Slightly convex slopes on summits
Slope: 0 to 8 percent
Taxonomic class: Coarse-loamy, siliceous, subactive, thermic Typic Paleudults

Commonly Associated Soils

- Benndale soils, which are in the lower positions, are browner than the McLaurin soils, and do not have a bisequum
- Somewhat excessively drained, sandy Eustis soils, which are in the slightly lower positions
- Latonia soils, which are on the lower marine and stream terraces
- Lucedale soils, which are in positions similar to those of the McLaurin soils, have more clay in the subsoil, and are darker red
- Lucy soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Ruston soils, which are in positions similar to those of the McLaurin soils but are less sandy

- Smithdale soils, which are in the lower positions, have redder subsoils than those of the McLaurin soils, and do not have a bisequum

Typical Pedon

McLaurin fine sandy loam, 2 to 5 percent slopes; 2.0 miles south of the town of Wiggins on U.S. Highway 49, about 200 feet east of the highway, in a wooded area; $SW^1/_4SW^1/_4$ sec. 31, T. 2 S., R. 11 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.

E—5 to 10 inches; strong brown (7.5YR 5/4) sandy loam; weak coarse subangular blocky structure; friable; many fine roots; strongly acid; clear smooth boundary.

Bt—10 to 28 inches; yellowish red (5YR 4/6) sandy loam; moderate medium subangular blocky structure; friable; common fine roots; sand grains coated and bridged with clay; strongly acid; clear wavy boundary.

B/E—28 to 37 inches; 80 percent yellowish red (5YR 5/6) sandy loam (B); 20 percent brownish yellow (10YR 6/6) loamy sand (E); weak medium subangular blocky structure; very friable; few fine roots; strongly acid; abrupt smooth boundary.

B´t1—37 to 52 inches; red (2.5YR 5/8) sandy loam; moderate medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; few faint clay films on faces of peds; common medium distinct strong brown (7.5YR 5/8) and few fine distinct red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

B´t2—52 to 72 inches; red (2.5YR 4/8) sandy loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; common distinct clay films on faces of peds; 1 to 3 percent, by volume, quartz pebbles; common medium distinct yellowish brown (10YR 5/8) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:

Color—hue of 10YR, value of 3 to 5, and chroma of 2 or 3

Texture—fine sandy loam

E horizon (where present):

Color—hue of 10YR, value of 4 to 6, and chroma of 2 to 6; or hue of 7.5YR, value of 5, and chroma of 4

Texture—sandy loam, fine sandy loam, loamy sand, or loamy fine sand

EB horizon (where present):

Color—hue of 10YR, value of 4 to 6, and chroma of 4 to 8; or hue of 7.5YR, value of 5, and chroma of 6

Texture—sandy loam, fine sandy loam, loamy sand, or loamy fine sand

Bt horizon:

Color—hue of 5YR, 2.5YR, or 10R, value of 4 or 5, and chroma of 4 to 8

Texture—loam, sandy loam, or fine sandy loam

B/E or E/B horizon:

Color—B part has hue of 5YR, 2.5YR, or 10R, value of 4 or 5, and chroma of 4 to 8; E part has hue of 7.5YR or 10YR, value of 6 to 8, and chroma of 3 to 8.

Texture—loamy sand, sandy loam, or fine sandy loam

B´t horizon:
Color—hue of 5YR, 2.5YR, or 10R, value of 4 or 5, and chroma of 4 to 8
Texture—sandy clay loam, sandy loam, or loam

Nugent Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Moderately rapid
Parent material: Sandy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Convex positions on natural levees along flood plains
Slope: 0 to 2 percent
Taxonomic class: Sandy, siliceous, thermic Typic Udifluvents

Commonly Associated Soils

- Moderately well drained, stratified clayey and loamy Annemaine soils, which are on remnants of low terraces
- Poorly drained Smithton soils, which are in drainageways
- Scattered areas of soils that are similar to the Jena soils but are moderately well drained

Typical Pedon

Nugent loamy sand, in an area of Jena-Nugent complex, frequently flooded; 2.25 miles west of State Highway 15 and about 50 feet from Red Creek, in a wooded area; $NE^1/_4SW^1/_4$ sec. 23, T. 3 S., R. 10 W.

A—0 to 5 inches; brown (10YR 4/3) loamy sand; weak very fine granular structure; very friable; many fine and medium roots; strongly acid; clear smooth boundary.
C1—5 to 15 inches; brown (10YR 5/3) sand; single grain; loose; common fine and medium roots; thin strata of brown loamy sand; strongly acid; clear wavy boundary.
C2—15 to 25 inches; very pale brown (10YR 7/3) sand; single grain; loose; few fine roots; few thin strata of brown loamy fine sand; very strongly acid; clear wavy boundary.
C3—25 to 30 inches; brown (10YR 5/3) loamy sand; massive; very friable; few fine roots; few thin strata of brown fine sandy loam; few fine distinct strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in root channels; very strongly acid; clear wavy boundary.
C4—30 to 51 inches; light yellowish brown (10YR 6/4) loamy sand; single grain; loose; very friable; few thin strata of brown fine sandy loam; strongly acid; clear wavy boundary.
C5—51 to 62 inches; very pale brown (10YR 7/3) sand; single grain; loose; few fine roots; few thin strata of brown fine sandy loam; very strongly acid.

Range in Characteristics

Reaction: Very strongly acid to slightly acid

A horizon:
Color—hue of 10YR, value of 4 to 7, and chroma of 2 to 4
Texture—loamy sand or sand

C horizon:
Color—hue of 10YR, value of 4 to 7, and chroma of 3 to 6; or hue of 7.5YR, value of 4 or 5, and chroma of 4 to 8

Texture—sand or loamy sand with thin strata of fine sandy loam, very fine sandy loam, loam, or silt loam
Redoximorphic features—few or common masses of iron accumulation in shades of brown and red

Poarch Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy sediments
Landscape: Coastal Plain
Landform: Broad upland ridges
Landform position: Slightly convex or concave slopes
Slope: 2 to 5 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleudults

Commonly Associated Soils

- Well drained Benndale soils, which do not have horizons with 5 percent or more plinthite segregations
- Somewhat poorly drained Escambia soils, which are on broad upland summits
- Malbis soils, which are in positions similar to those of the Poarch soils, contain 5 percent or more plinthite segregations, and are less sandy than the Poarch soils

Typical Pedon

Poarch fine sandy loam, 2 to 5 percent slopes; 3.5 miles south of the town of Wiggins on old Highway 49 and 300 feet east of the road, in a wooded area; NE$^1/_4$SE$^1/_4$ sec. 7, T. 3 S., R. 11 W.

A—0 to 4 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary.
E—4 to 13 inches; light yellowish brown (10YR 6/4) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; gradual smooth boundary.
Bt1—13 to 28 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; strongly acid; clear wavy boundary.
Bt2—28 to 35 inches; yellowish brown (10YR 5/6) loam; weak fine subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; common medium prominent red (2.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; gradual wavy boundary.
Bt3—35 to 42 inches; 45 percent brownish yellow (10YR 6/6) and 40 percent yellowish brown (10YR 5/4) loam; weak fine subangular blocky structure; friable; few faint clay films on faces of peds; many medium distinct light gray (10YR 7/2) irregularly shaped iron depletions with clear boundaries in the matrix; common medium distinct red (2.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; gradual wavy boundary.
Btv1—42 to 52 inches; 35 percent brownish yellow (10YR 6/6), 30 percent light gray (10YR 7/1), and 25 percent light yellowish brown (10YR 6/4) loam; weak fine subangular blocky structure; friable; few faint clay films on faces of peds; 8 percent, by volume, firm plinthite segregations; common medium distinct red (2.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries

in the matrix; grayish areas are iron depletions; strongly acid; gradual wavy boundary.

Btv2—52 to 62 inches; 35 percent strong brown (7.5YR 5/8), 25 percent yellowish red (5YR 5/8), and 25 percent yellowish brown (10YR 5/6) loam; weak fine subangular blocky structure; friable; few faint clay films on faces of peds; 5 percent, by volume, firm plinthite segregations; many medium distinct light gray (10YR 7/2) irregularly shaped iron depletions with clear boundaries in the matrix; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content of plinthite segregations: 5 to 25 percent, by volume, in the Btv horizon
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied.

A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3
Texture—fine sandy loam or loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 3 or 4
Texture—sandy loam, fine sandy loam, or loam

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam, loam, or fine sandy loam; 8 to 18 percent clay and 20 to 55 percent silt in the upper part
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of brown and red

Btv horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of red, brown, yellow, or gray
Texture—sandy loam, loam, or fine sandy loam in the upper part; sandy loam, loam, fine sandy loam, sandy clay loam, or clay loam in the lower part
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, and red

Ruston Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Upland ridges
Landform position: Planar or slightly convex
Slope: 0 to 8 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Paleudults

Commonly Associated Soils

- Benndale soils, which are in the lower positions, are browner than the Ruston soils, and do not have a bisequum
- Somewhat excessively drained, sandy Eustis soils, which are in the slightly lower positions

- Lucedale soils, which are in positions similar to those of the Ruston soils, have more clay in the subsoil, and are dark red
- Lucy soils, which are in landscape positions similar to those of the Ruston soils, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches thick, and are not bisequal
- McLaurin soils, which are in positions similar to those of the Ruston soils but are sandier
- Loamy Smithdale soils, which are in the lower positions and do not have a bisequum
- Somewhat excessively drained Troup soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 79 inches

Typical Pedon

Ruston fine sandy loam, 1 to 3 percent slopes; 5 miles west of Perkinston and 1.5 miles north on Parker road, in a wooded area; NW$^1/_4$NW$^1/_4$ sec. 7, T. 3 S., R. 12 W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary.

Bt1—7 to 18 inches; red (2.5YR 5/8) loam; weak medium subangular blocky structure; friable; common fine roots; sand grains coated and bridged with clay; very strongly acid; gradual smooth boundary.

Bt2—18 to 29 inches; red (2.5YR 5/8) loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; sand grains coated and bridged with clay; common distinct brownish yellow (10YR 6/8) stains lining old root channels; very strongly acid; clear wavy boundary.

Bt/E—29 to 38 inches; 70 percent yellowish red (5YR 5/8) and 30 percent yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; discontinuous bands of firm and brittle material (E) up to 10 centimeters in thickness make up 30 percent of horizon; common clay bridges between sand grains in Bt part; very strongly acid; clear wavy boundary.

B´t1—38 to 45 inches; red (2.5YR 4/8) sandy clay loam; moderate medium subangular blocky structure; firm; few fine pores; common distinct discontinuous red (2.5YR 4/6) clay films on faces of peds; very strongly acid; gradual wavy boundary.

B´t2—45 to 62 inches; red (2.5YR 4/8) sandy clay loam; common medium distinct strong brown (7.5YR 5/8) mottles; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Content and size of rock fragments: Less than 15 percent, by volume, in the E and B horizons; mostly ironstone fragments and quartz pebbles

Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:

Color—hue of 10YR, value of 4 to 6, and chroma of 2 to 4
Texture—fine sandy loam

E horizon (where present):

Color—hue of 10YR, value of 5 or 6, and chroma of 3 or 4
Texture—fine sandy loam or loamy sand

B/E horizon:

Color—hue of 5YR or 2.5YR, value of 4 to 6, and chroma of 4 to 8 in the B part; hue of 10YR, value of 5 or 6, and chroma of 3 or 4 in the E part

Texture—sandy clay loam, fine sandy loam, loam, or clay loam in the B part; fine sandy loam, loamy sand, or sandy loam in the E part

Bt and B´t horizons:
Color—hue of 5YR or 2.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy clay loam, fine sandy loam, loam, or clay loam; 18 to 30 percent clay and 20 to 50 percent silt in the upper 20 inches

Saucier Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Loamy over clayey marine sediments
Landscape: Coastal Plain
Landform: Upland ridges and hillslopes
Landform position: Slightly convex slopes
Slope: 2 to 8 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Plinthaquic Paleudults

Commonly Associated Soils

- Malbis soils, which are in positions similar to those of the Saucier soils but do not have mottles with chroma of 2 or less within a depth of 30 inches
- Poarch soils, which are in the slightly higher positions and are sandier than the Saucier soils
- Somewhat poorly drained Susquehanna soils, which are in landscape positions similar to those of the Saucier soils but have a loamy surface layer and a clayey subsoil
- Scattered areas of Saucier soils that have less than 5 percent plinthite segregations in the subsoil

Typical Pedon

Saucier fine sandy loam, undulating; 4.2 miles east of the town of McHenry on a county road to an intersection, south 1.5 miles on a county road, 1.5 miles east on a U.S. Forest Service road, and 250 feet north of the road, in a wooded area; $SW^1/_4SW^1/_4$ sec. 19, T. 4 S., R. 10 W.

A—0 to 5 inches; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear smooth boundary.

E—5 to 8 inches; brown (10YR 5/3) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; strongly acid; gradual smooth boundary.

BE—8 to 12 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; many fine roots; strongly acid; gradual wavy boundary.

Bt1—12 to 22 inches; yellowish brown (10YR 5/8) loam; moderate medium subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; few fine distinct yellowish red (5YR 5/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; gradual wavy boundary.

Bt2—22 to 28 inches; yellowish brown (10YR 5/8) loam; few fine faint pale brown (10YR 6/3) mottles; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; 2 percent, by volume, firm plinthite segregations; few fine distinct strong brown (7.5YR 5/8) irregularly shaped

masses of iron accumulation with clear boundaries in the matrix; strongly acid; clear smooth boundary.

Btv—28 to 42 inches; 35 percent light brownish gray (10YR 6/2), 25 percent light yellowish brown (10YR 6/4), and 25 percent strong brown (7.5YR 5/8) clay loam; moderate medium subangular blocky structure; firm; common distinct clay films on faces of peds; 10 percent, by volume, firm plinthite segregations; common medium distinct yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; grayish areas are iron depletions; strongly acid; gradual smooth boundary.

2Btv1—42 to 54 inches; 30 percent light brownish gray (10YR 6/2), 30 percent strong brown (7.5YR 5/8), and 25 percent brownish yellow (10YR 6/8) silty clay loam; moderate medium angular blocky structure; firm, slightly plastic; common distinct clay films on faces of peds; 8 percent, by volume, firm plinthite segregations; many medium prominent red (2.5YR 4/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; grayish areas are iron depletions; very strongly acid; gradual smooth boundary.

2Btv2—54 to 70 inches; 35 percent light gray (2.5Y 7/2), 35 percent red (10R 4/6), and 30 percent brownish yellow (10YR 6/8) silty clay loam; moderate medium angular blocky structure; firm, slightly plastic; common distinct clay films on faces of peds; 5 percent, by volume, firm plinthite segregations; grayish and yellowish areas are iron depletions; red areas are masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Content of plinthite segregations: 5 to 25 percent, by volume, in the Btv horizon

Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:

Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 3; or hue of 2.5Y, value of 3 or 4, and chroma of 2

Texture—fine sandy loam

E horizon (where present):

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 or 3

Texture—sandy loam, fine sandy loam, or loam

BE horizon:

Color—hue of 10YR, value of 4 to 6, and chroma of 4 to 6

Texture—sandy loam, fine sandy loam, or loam

Bt and Btv horizons:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—loam, sandy clay loam, or clay loam in the upper part of the Bt horizon; ranges to silty clay in the lower part

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, and red

2Bt horizon:

Color—multicolored in shades of brown, gray, yellow, and red

Texture—clay, clay loam, silty clay, silty clay loam, or sandy clay loam

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, and red

Smithdale Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy sediments
Landscape: Coastal Plain
Landform: Upland hillslopes
Landform position: Convex slopes
Slope: 8 to 25 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Typic Hapludults

Commonly Associated Soils

- Benndale soils, which are in landscape positions similar to those of the Smithdale soils but have a browner subsoil
- Somewhat poorly drained Eustis soils, which are in positions similar to those of the Smithdale soils but have a sandy particle-size class
- Sandy Lucy and Troup soils, which are on the lower parts of side slopes
- McLaurin soils, which are on upland ridges and hillslopes, have a bisequum, and are sandier than the Smithdale soils
- Ruston soils, which are on upland ridges and hillslopes and have a bisequum

Typical Pedon

Smithdale fine sandy loam, 15 to 25 percent slopes; 2 miles north of the town of Wiggins on State Highway 29, about 1.3 miles east along Oil Well Road to a gravel road, south 1.3 miles on the gravel road, west 1,200 feet to county dump, 20 feet right of the dump, in a wooded area; SE¼NW¼ sec. 16, T. 2 S., R. 11 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium granular structure; very friable; many fine and medium roots; very strongly acid; clear smooth boundary.

E—5 to 13 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium granular structure; very friable; many fine and medium roots; very strongly acid; clear smooth boundary.

Bt1—13 to 25 inches; yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; many fine roots; common distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—25 to 35 inches; yellowish red (5YR 5/8) loam; moderate medium subangular blocky structure; friable; few fine roots; few distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—35 to 48 inches; yellowish red (5YR 5/8) sandy loam; moderate fine and medium subangular blocky structure; friable; few faint clay films on faces of peds; sand grains coated and bridged with clay; very strongly acid; gradual wavy boundary.

Bt4—48 to 62 inches; yellowish red (5YR 5/8) sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few faint clay films on faces of peds; common pockets of pale brown (10YR 6/3) sand grains; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon (where present):
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3
Texture—fine sandy loam

Ap horizon (where present):
Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 2 to 6
Texture—fine sandy loam

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, loamy fine sand, or loamy sand

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8; few to many streaks of pale brown sand grains in the lower part
Texture—clay loam, loam, or sandy clay loam in the upper part; loam or sandy loam in the lower part

Smithton Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy alluvial sediments
Landscape: Coastal Plain
Landform: Stream terraces and flood plains
Landform position: Flat to slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Paleaquults

Commonly Associated Soils

- Somewhat poorly drained Escambia soils, which are at the slightly higher elevations and have horizons with 5 percent or more plinthite segregations
- Moderately well drained Harleston soils, which are at the slightly higher elevations and on terraces

Typical Pedon

Smithton fine sandy loam, frequently flooded; 8.5 miles east of the town of McHenry on a county road, 1.2 miles south on a U.S. Forest Service road, 1.0 mile southeast on a road, and 10 feet north of the road, in a wooded area; $SW^1/_4SW^1/_4$ sec. 22, T. 4 S., R. 10 W.

A—0 to 4 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary.

Eg—4 to 14 inches; dark grayish brown (10YR 5/2) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary.

BEg—14 to 20 inches; light brownish gray (10YR 6/2) fine sandy loam; weak fine subangular blocky structure; friable; few fine roots; sand grains coated and bridged with clay; common yellowish brown (10YR 5/8) stains in root channels; common fine faint brown (10YR 5/3) irregularly shaped masses of iron accumulation with diffuse boundaries in the matrix; strongly acid; gradual smooth boundary.

Btg1—20 to 36 inches; light brownish gray (10YR 6/2) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; sand grains coated and

bridged with clay; common medium distinct yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; strongly acid; gradual wavy boundary.

Btg2—36 to 48 inches; light brownish gray (10YR 6/2) loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; common medium distinct dark gray (10YR 4/1) irregularly shaped iron depletions with clear boundaries in the matrix; common medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Btg3—48 to 62 inches; light gray (10YR 6/1) fine sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few fine faint gray (10YR 5/1) irregularly shaped iron depletions with diffuse boundaries in the matrix; few fine distinct yellow (2.5Y 7/6) and yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Content of concretions: None to many; mostly iron and manganese
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
- Color—hue of 10YR, value of 3 to 5, and chroma of 2
- Texture—fine sandy loam
- Redoximorphic features (where present)—few or common masses of iron accumulation in shades of brown and yellow

Eg horizon:
- Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2
- Texture—loam, fine sandy loam, or sandy loam
- Redoximorphic features—masses of iron accumulation in shades of brown and yellow

BEg horizon:
- Color—hue of 10YR, value of 6, and chroma of 1 or 2
- Texture—fine sandy loam or loam
- Redoximorphic features—masses of iron accumulation in shades of brown, yellow, and red

Btg horizon:
- Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2
- Texture—loam or fine sandy loam; 12 to 18 percent clay in the upper 20 inches
- Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, and red

Susquehanna Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Ridgetops and hillslopes
Landform position: Slightly concave to slightly convex slopes

Slope: 1 to 15 percent
Taxonomic class: Fine, smectitic, thermic Vertic Paleudalfs

Commonly Associated Soils

- Moderately well drained Malbis and Saucier soils, which are less sandy than the Susquehanna soils and contain 5 percent or more plinthite segregations in the subsoil
- Scattered areas of Susquehanna soils that have a surface layer of sandy loam

Typical Pedon

Susquehanna silt loam, 1 to 5 percent slopes; 6.5 miles west of Wiggins on State Highway 26, right about 1 mile on a gravel road, and 30 feet left of the road, in a wooded area; NW¼NW¼ sec. 25, T. 2 S., R. 13 W.

A—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; friable; many fine roots; very strongly acid; clear smooth boundary.

E—5 to 8 inches; light yellowish brown (10YR 6/4) silt loam; weak fine granular structure; friable; many fine roots; root channels filled with material from the A horizon; very strongly acid; clear smooth boundary.

Bt—8 to 20 inches; strong brown (7.5YR 5/6) clay; moderate fine angular blocky structure; firm, moderately sticky and moderately plastic; many fine roots; common thin clay films on faces of peds; common medium distinct yellowish red (2.5YR 4/6) and light yellowish brown (10YR 6/4) irregularly shaped masses of iron accumulation with clear boundaries in the matrix; few fine distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions with clear boundaries in the matrix; very strongly acid; gradual wavy boundary.

Btg1—20 to 30 inches; light gray (10YR 7/2) silty clay; moderate medium angular blocky structure; firm, moderately sticky and moderately plastic; common thin clay films on faces of peds; few distinct stress surfaces on faces of peds; common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg2—30 to 61 inches; light brownish gray (2.5Y 6/2) silty clay; moderate medium angular blocky structure; firm, moderately sticky and moderately plastic; common thin clay films on faces of peds; few distinct slickensides; common medium prominent red (2.5YR 4/6) and common medium faint pale brown (10YR 6/3) irregularly shaped masses of iron accumulation with distinct boundaries in the matrix; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 3
Texture—silt loam

E horizon (where present):
Color—hue of 10YR or 7.5YR, value of 5 or 6, and chroma of 2 to 4
Texture—fine sandy loam or silt loam

Bt horizon:
Color—upper part has hue of 10R to 5YR, value of 4 or 5, and chroma of 4 to 8, or hue of 7.5YR, value of 5, and chroma of 4 to 6; lower part has hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2; or is multicolored in shades of gray, red, and brown.

Texture—clay loam, silty clay, silty clay loam, or clay
Redoximorphic features—common to many iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, or red

Troup Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate
Parent material: Unconsolidated sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Convex slopes
Slope: 5 to 8 percent
Taxonomic class: Loamy, kaolinitic, thermic Grossarenic Kandiudults
Taxadjunct statement: The Troup soils in Stone County are taxadjuncts because they do not have a kandic horizon. In this survey area, the Troup soils are loamy, siliceous, subactive, thermic Grossarenic Paleudults.

Commonly Associated Soils

- Well drained Lucy soils, which are in positions similar to those of the Troup soils but have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Well drained McLaurin soils, which are on upland ridges and hillslopes, are less sandy than the Troup soils, and are bisequal
- Well drained Ruston soils, which are on upland ridges, are less sandy than the Troup soils, and are bisequal
- Well drained Smithdale soils, which are on the higher upland side slopes and do not have a bisequum

Typical Pedon

Troup loamy sand, 5 to 8 percent slopes; west 5 miles on Sweet Beulah Road from Perkinston Campus, Gulf Coast Junior College, right 1.75 miles on a gravel road, and 100 feet west of the road, in a wooded area; NW$^{1}/_{4}$SE$^{1}/_{4}$ sec. 7, T. 3 S., R. 12 W.

A—0 to 4 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; many fine and medium roots; very strongly acid; abrupt smooth boundary.
E1—4 to 14 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; 10 to 15 percent of the sand grains are uncoated; many fine roots; very strongly acid; gradual wavy boundary.
E2—14 to 23 inches; yellowish brown (10YR 5/8) loamy sand; single grain; loose; common medium pockets of pale brown (10YR 6/3) uncoated sand grains; few fine roots; very strongly acid; gradual wavy boundary.
E3—23 to 57 inches; strong brown (7.5YR 5/8) loamy sand; single grain; loose; common medium pockets of pale brown (10YR 6/3) uncoated sand grains; very strongly acid; gradual smooth boundary.
EB—57 to 66 inches; yellowish red (5YR 5/8) sandy loam; weak fine granular structure; few fine streaks of reddish yellow (7.5YR 6/6) sand grains; few medium faint red (2.5YR 4/6) masses of iron accumulation; strongly acid; gradual smooth boundary.
Bt—66 to 70 inches; yellowish red (5YR 5/8) sandy loam; few fine faint red (2.5YR 4/6) mottles; weak fine subangular blocky structure; sand grains coated and

bridged with clay; few fine faint red (2.5YR 4/6) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of the solum: More than 80 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 2 or 3
Texture—loamy sand

E horizon:
Color—hue of 10YR or 7.5YR, value of 5 to 8, and chroma of 4 to 8
Texture—loamy sand, loamy fine sand, or sand

EB or BE horizon (where present):
Color—hue of 5YR to 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam in the EB horizon; sandy loam or fine sandy loam in the BE horizon
Redoximorphic features—few or common few masses of iron accumulation in shades of red

Bt horizon:
Color—hue of 10R to 5YR, value of 4 to 7, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—few masses of iron accumulation in shades of red

Formation of the Soils

This section describes the major factors and processes that have affected the formation and morphology of the soils of Stone County. Soil is a natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthly parent material, as conditioned by relief over periods of time.

Factors of Soil Formation

Soils are formed through the interaction of five major factors: climate, plant and animal life, parent material, relief, and time. The relative influence of each factor varies from place to place, and in some places one factor dominates the formation of a soil and determines most of its properties. Local variations between the soils in Stone County are caused mainly by differences in parent material, relief, and time and by human activities.

In a few areas in the county, the influence of human activities on soils has been great. For example, bulldozers and other earth-moving equipment have altered and modified soils.

Climate

Stone County has the moist, temperate climate that is characteristic of the southeastern United States. Summers are hot, and winters are cool and fairly short. Annual precipitation is about 62 inches. Annual snowfall is less than 1.0 inch. Average annual temperature is about 66.2 degrees F.

The generally moist climate has caused strong weathering of the soils. Almost all of the soils are acidic. Weathering and leaching have left the natural level of plant nutrients low in most of the soils.

Plant and Animal Life

All living organisms, including vegetation, bacteria, fungi, and animals, have important effects on soil formation. Vegetation generally supplies organic matter, which decomposes and gives a darker color to the surface horizons. Bacteria and fungi decompose vegetation and return nutrients to the soil. Many of the organic reactions and processes involving bacteria and fungi release materials that affect the soil-forming processes. Burrowing animals, earthworms, ants, cicada, and other insects mix soils and affect soil structure. They also make the soils more open and porous for movement of air and water.

Human activities affect a wide range of soil properties. Some activities, such as tillage and management practices, affect soil structure. Some activities make soils more porous. Other activities, such as foot traffic and vehicle traffic, compact the soils and make them more dense. Intensive human use and disturbance have caused accelerated erosion of some soils, commonly accompanied by increased deposition on flood plains and in depressional areas. Some human activities, such as applying

limestone and fertilizer, have also altered soils chemically, making the soils more productive for most plants. Humans have introduced plants and animals not normally found in the area, and these will eventually affect the soil.

Parent Material

Parent material is material in which soils form. It influences the mineral and chemical composition of the soil and, to a large extent, the rate at which soil formation takes place. Stone County is entirely in the Gulf Coastal Plain physiographic region of Mississippi and forms part of the extensive Piney Woods Physiographic Province.

Soils on the uplands formed in residual Coastal Plain sediments, and soils on the low terraces and flood plains formed in alluvium. Alluvium consists of recent materials that washed down from the uplands. The soils in the uplands formed in materials from the Pascagoula and Hattiesburg Formations (Miocene) and in materials from what is probably the Citronelle Formation (Pleistocene). The Pascagoula and Hattiesburg Formations include beds of silty-clayey deposits, some lenses and beds of fine sand, and some beds of swelling clays. The “Citronelle Formation” is made up of poorly indurated sands, locally developed silty-clayey lenses, and somewhat sporadically distributed gravelly portions. Alluvium includes cut-terrace forms on hillsides, which are remnants of an older alluvial plain, and collections of sand and gravel, which form modern alluvium.

Relief

Relief, or the shape of the landscape, influences soil formation. It controls surface drainage and affects the percolation of water through the soil.

Relief commonly affects the depth of soil, the plant and animal life, and some of the soil-forming processes. Steeper soils are more subject to erosion because of concentrated, rapid runoff. Soils in depressional areas are usually wet; soils on higher, convex surfaces are better drained. Differences in topography cause free water to leave the well drained soils and to accumulate in the poorly drained soils.

The relief in Stone County ranges from nearly level to steep. Slopes range from 0 to about 25 percent.

Time

A long period of time is required for soil formation. Variations in the age of the soil account for most of the differences that are not attributed to other factors of soil formation. Soils along streams are the youngest soils in the county. Older soils have a greater degree of horizon differentiation than younger soils. The soils on the uplands are the oldest soils in the county. Most of the soils that formed on the smoother parts of the uplands or on the older stream terraces have a well defined soil profile. These soils have a B horizon that has an accumulation of silicate clay.

Processes of Horizon Differentiation

Several processes were involved in the formation of horizons in the soils of Stone County. These processes are accumulation of organic matter, leaching of calcium carbonates and bases, reduction and transfer of iron, and formation and translocation of silicate clay minerals. In most soils, more than one of these processes have been active.

The accumulation of organic matter in the upper part of the profile results in the formation of an A horizon. The content of organic matter in the soils in Stone County is low, except in the poorly drained Croatan and Johnston soils.

Carbonates and bases have been leached from nearly all of the soils. This leaching has contributed to the development of horizons. Soil scientists generally agree that leaching of bases from the upper horizons of a soil commonly precedes the translocation of silicate clay minerals. Most of the soils in the county are moderately to strongly leached.

The reduction and transfer of iron, a process called gleying, is evident in the poorly drained soils of the county. Smithton and Atmore soils are examples. This gleying is indicated by the gray color of the horizons below the surface layer. Segregation of iron is indicated in some horizons by reddish brown mottles and concretions.

In some soils, the translocation of clay minerals has contributed to horizon development. Benndale, Malbis, and McLaurin soils are examples. In such soils, an eluviated E horizon is above the B horizon. It contains less clay than the B horizon and generally is lighter in color. The B horizon commonly has accumulations of clay or clay films in pores and on the ped surfaces. These soils were probably leached of carbonates and soluble salts to a considerable extent before translocation of silicate clays took place.

Surface and Near-Surface Geology

By Professor Richard L. Bowen, Ph.D., Department of Geology, University of Southern Mississippi

No detailed geologic studies have yet been published concerning Stone County or most of the rest of southeastern Mississippi. County geologic reports exist for Forrest County (Foster and McCutcheon, 1941), which is north of Stone County, and for George County (Dinkins and McCutcheon, 1967), which is directly east of Stone County. Some comments concerning Stone County appear in a general geologic study of the Mississippi Gulf Coast (Brown and others, 1944). Investigations now in progress at the Geology Department of the University of Southern Mississippi have furnished some additional information regarding the geology of Stone County. No portion of the county has as yet been mapped in detail.

Physiography.—All of Stone County lies within the extensive Piney Woods Physiographic Province. This province, of which Stone County is a typical component, is a province of rolling hills underlain by dominantly clayey to sandy, weakly-indurated, late Cenozoic (? Miocene-Quaternary) sediments that are cut into by well developed principal stream valleys that have extensive bottomlands and flood plains.

Topography.—Elevations in Stone County range from more than 370 feet along the western border with Pearl River County to less than 50 feet along the eastern border with George County. The principal streams of Stone County, Red Creek and Black Creek, drain easterly into the Pascagoula River system. About three-quarters of the county is sloping land of the Piney Woods Hills. The slopes are mostly gentle, typically less than 6 to 8 percent and only uncommonly more than 10 to 12 percent. Scattered hill-top flat lands, which are rarely more than 1 square mile, remain on divides between the principal streams as remnants of a formerly much more extensive, nearly flat, upland surface. Locally flat, step-like, stream-cut, terrace remnants occur with some regularity on the hill slopes. Valley bottoms are typically at least one-half mile in width between valley walls; they increase to more than 2 miles in width in the eastern portion of the county along both Black Creek and Red Creek. Nearly all these valley bottoms are subject to flooding under prolonged storm conditions. About 80 percent of the county drains easterly into the Pascagoula River system. The rest of the county, the southwestern part, drains southeasterly, ultimately into Biloxi Bay.

Surface Geologic Units

Hattiesburg and Pascagoula Formations (Miocene).—Stone County lies within the portion of Mississippi where a transition occurs between the non-marine deposits of the Hattiesburg Formation and the estuarine to marine deposits of the Pascagoula Formation. The precise relations between these units are not yet clearly defined. They are difficult to discriminate either in the field or in subsurface studies, largely because they are mostly composed of silty to clayey sediments of similar character and contain few fossils. Some fossil wood has been found in both units, and some shell accumulations of Miocene age have been found in the Pascagoula Formation in Jackson County. In Stone County, these deposits vary from light bluish-grey to medium olive. They contain some lenses and beds of fine sand and some beds of swelling clays that range from 6 inches to 5 feet. These deposits are mostly impermeable and therefore subject to extensive sheet wash during storms. Soils on slopes underlain by the Hattiesburg and Pascagoula Formations commonly have profiles that are less than 1 foot in thickness. The contact between these deposits and those of the “Citronelle Formation,” which typically is the unit deposited on top of them, varies widely in elevation. In parts of Stone County, these clayey units underlie the highest hills.

The actual thickness of these clayey beds in Stone County is uncertain; perhaps an average figure is 400 feet. See, however, the commentary regarding groundwater hydrology in the section “General Natural of the Survey Area.”

“Citronelle Formation” (? Miocene to ? Early Quaternary).—A variable thickness (0 to more than 200 feet) of poorly indurated sands with some locally developed lenses of silty-clayey deposits and many sporadically distributed gravelly portions lies upon an irregular surface that developed on the older deposits. An irregularly occurring concretionary layer of secondarily deposited iron oxides (“hardpan”) occurs with some regularity at the basal contact; similar layers of “hardpan” are also scattered within the sandier portions of the unit. These sands probably correlate with the Citronelle Formation of southwestern Alabama. They constitute a complex of channel sands and gravels and overbank deposits made by a collection of frequently migrating streams that in the past developed an enormous alluvial plain over much of Mississippi and states to the east. Some fossil wood and reworked marine fossils have been found in these sandy beds. Gravel and sand pits are common through Stone County in the “Citronelle Formation.” These deposits are commonly stained by reddish, yellowish, and orange colors produced by deposition of iron oxides from migrating ground water. Most shallow (to 80 feet) wells in Stone County get their water from this unit. Small local areas of “badlands” have developed where poor farming practices were used on these deposits.

Alluvium (Late Quaternary).—The stream systems now present in Stone County became established as a consequence of Quaternary uplift and the development of a new set of stream systems unrelated to those which formed the alluvial plain complex of the “Citronelle Formation.” The new streams cut down in pulses through the older alluvial-plain complex and the clayey beds beneath it. The pulses are recorded in the terrace forms on the sides of the hill slopes. Nearly all such terraces are cut surfaces, and only rarely is a veneer of up to as much as $1^1/_2$ feet of “terrace deposits” found on such surfaces. However, collections of sand and gravel that form the modern alluvium occur locally along the valley bottoms of main tributaries and extensively along the channels of Red Creek and Black Creeks. This material can be considered as active and subject to re-transport and deposition in association with major flooding. Numerous active and abandoned sand and gravel pits are along these flood plains.

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov/)

Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear

(perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequal. See Bisequum.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. The normal flood plain of a stream, subject to flooding.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The

point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long

geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion, degree. The estimated amount of the original A horizon and E horizon that have been lost to erosion. If the original A horizon and E horizon had a combined thickness of less than 20 centimeters, the estimated loss is based on the upper 20 centimeters. The classes for degree of erosion, expressed as a percent the original A horizon and E horizon lost, are:

None	0 percent
Slight	0 to 25 percent
Moderate	25 to 75 percent
Severe	75 to 100 percent
Very severe	more than 75 percent, including total removal of the A horizon

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flagstone. A thin fragment of sandstone, ironstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An

explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level	0 to 1 percent
Nearly level	0 to 2 percent
Very gently sloping	1 to 3 percent
Gently sloping	2 to 5 percent
Moderately sloping	5 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 25 percent

Classes for complex slopes are as follows:

Nearly level	0 to 2 percent
Gently undulating	0 to 5 percent
Undulating	2 to 8 percent
Rolling	8 to 15 percent
Hilly	15 to 25 percent

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and

ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth’s surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

[Recorded in the period 1961-1987 at Wiggins, Mississippi]

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temp. higher than--	Minimum temp. lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	*°F*	*°F*	*°F*	*°F*	*Units*	*In*	*In*	*In*		*In*
January	60.2	36.1	48.2	79	9	289	5.11	2.53	7.36	6	0.5
February	64.0	37.7	50.8	81	18	314	6.44	3.63	8.93	6	0.0
March	71.9	46.3	59.1	87	25	589	6.64	3.32	9.53	7	0.0
April	79.6	54.5	67.1	90	34	804	5.01	1.61	7.80	5	0.0
May	85.3	60.7	73.0	95	44	1,004	4.65	2.86	6.26	5	0.0
June	91.1	67.4	79.2	100	54	1,159	4.35	1.67	6.60	6	0.0
July	92.5	70.0	81.2	100	61	1,271	5.95	3.89	7.82	9	0.0
August	91.8	69.6	80.7	98	60	1,249	5.56	2.69	8.04	7	0.0
September	88.5	65.2	76.9	96	48	1,088	4.64	1.69	7.09	6	0.0
October	81.2	53.9	67.6	92	35	827	3.08	1.14	5.50	3	0.0
November	71.7	45.5	58.6	86	24	542	4.40	2.27	6.26	5	0.0
December	63.8	39.7	51.8	81	17	388	6.40	4.09	8.49	7	0.0
Yearly:											
Average	78.5	53.9	66.2	---	---	---	---	---	---	---	---
Extreme	105	1	---	101	10	---	---	---	---	---	---
Total	---	---	---	---	---	9,525	62.22	45.24	70.43	72	0.5

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.--Freeze Dates in Spring and Fall

[Recorded in the period 1961-1987 at Wiggins, Mississippi]

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Mar. 3	Mar. 19	Apr. 4
2 years in 10 later than--	Feb. 23	Mar. 12	Mar. 28
5 years in 10 later than--	Jan 31	Feb. 26	Mar. 13
First freezing temperature in fall:			
1 year in 10 earlier than--	Nov. 24	Nov. 14	Oct. 26
2 years in 10 earlier than--	Dec. 4	Nov. 21	Nov. 1
5 years in 10 earlier than--	Dec. 27	Dec. 3	Nov. 13

Table 3.--Growing Season

[Recorded in the period 1961-1987 at Wiggins, Mississippi]

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	*Days*	*Days*
9 years in 10	282	246	221
8 years in 10	298	259	232
5 years in 10	> 365	282	254
2 years in 10	> 365	306	276
1 year in 10	> 365	318	288

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1	Annemaine loam, occasionally flooded	615	0.2
2	Atmore loam	1,782	0.6
3	Benndale fine sandy loam, 2 to 5 percent slopes	12,700	4.4
4	Benndale fine sandy loam, 5 to 8 percent slopes	1,333	0.5
5	Benndale fine sandy loam, rolling	7,154	2.5
6	Benndale fine sandy loam, undulating	17,353	6.1
7	Escambia fine sandy loam, 0 to 2 percent slopes	178	*
8	Escambia fine sandy loam, undulating	1,111	0.4
9	Eustis loamy sand, 12 to 17 percent slopes	782	0.3
10	Eustis loamy sand, undulating	377	0.1
11	Harleston fine sandy loam, occasionally flooded	19,069	6.7
12	Jena-Nugent complex, frequently flooded	4,669	1.6
13	Johnston and Croatan soils, frequently flooded	5,502	1.9
14	Latonia fine sandy loam, occasionally flooded	1,017	0.4
15	Lucedale loam, 0 to 2 percent slopes	382	0.1
16	Lucy loamy sand, 2 to 5 percent slopes	1,701	0.6
17	Malbis fine sandy loam, 2 to 5 percent slopes	483	0.2
18	Malbis fine sandy loam, 5 to 8 percent slopes	112	*
19	Malbis fine sandy loam, undulating	4,481	1.6
20	McLaurin fine sandy loam, 0 to 2 percent slopes	2,737	1.0
21	McLaurin fine sandy loam, 2 to 5 percent slopes	29,493	10.3
22	McLaurin fine sandy loam, 5 to 8 percent slopes	7,423	2.6
23	McLaurin fine sandy loam, undulating	23,512	8.2
24	Pits-Udorthents complex	556	0.2
25	Poarch fine sandy loam, 2 to 5 percent slopes	4,588	1.6
26	Ruston fine sandy loam, 0 to 1 percent slopes	711	0.2
27	Ruston fine sandy loam, 1 to 3 percent slopes	956	0.3
28	Ruston fine sandy loam, undulating	1,060	0.4
29	Saucier fine sandy loam, 2 to 5 percent slopes	2,102	0.7
30	Saucier fine sandy loam, 5 to 8 percent slopes	1,153	0.4
31	Saucier fine sandy loam, undulating	14,966	5.2
32	Saucier-Susquehanna association, 2 to 8 percent slopes	3,582	1.2
33	Smithdale fine sandy loam, 8 to 15 percent slopes	40,439	14.1
34	Smithdale fine sandy loam, 15 to 25 percent slopes	9,377	3.3
35	Smithton fine sandy loam, frequently flooded	24,607	8.6
36	Smithton-Harleston association, occasionally flooded	7,152	2.5
37	Susquehanna silt loam, 1 to 5 percent slopes	1,188	0.4
38	Susquehanna silt loam, 5 to 15 percent slopes	16,937	5.9
39	Susquehanna silt loam, undulating	9,935	3.5
40	Troup loamy sand, 5 to 8 percent slopes	882	0.3
W	Water	2,543	0.9
	Total	286,700	100.0

* Less than 0.1 percent.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture

[Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Corn	Cotton lint	Improved bermudagrass	Soybeans	Tall fescue
		Bu	*Lbs*	*AUM*	*Bu*	*AUM*
1:						
Annemaine	2w	100	800	---	40	---
2:						
Atmore	4w	40	---	---	20	7.0
3:						
Benndale	2e	75	650	10.5	30	---
4:						
Benndale	3e	75	650	10.5	30	---
5:						
Benndale	4e	75	---	10.5	30	---
6:						
Benndale	3e	70	650	9.0	25	---
7:						
Escambia	2w	100	---	9.0	40	9.0
8:						
Escambia	2e	95	---	9.0	35	9.0
9:						
Eustis	7s	---	---	---	---	---
10:						
Eustis	3s	60	---	7.0	25	---
11:						
Harleston	2w	90	---	11.0	35	---
12:						
Jena	5w	---	---	---	---	---
Nugent	5w	---	---	---	---	3.5
13:						
Johnston	7w	---	---	---	---	---
Croatan	7w	---	---	---	---	---
14:						
Latonia	2w	60	---	9.5	25	---
15:						
Lucedale	1	80	750	10.0	40	---
16:						
Lucy	2s	80	650	8.0	33	---
17:						
Malbis	2e	95	750	9.5	37	---
18:						
Malbis	3e	95	750	9.5	37	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Improved bermudagrass	Soybeans	Tall fescue
		Bu	*Lbs*	*AUM*	*Bu*	*AUM*
19:						
Malbis	3e	80	650	9.0	30	---
20:						
McLaurin	2s	80	650	11.0	30	---
21:						
McLaurin	2e	75	600	10.0	25	---
22:						
McLaurin	3e	70	---	8.5	25	---
23:						
McLaurin	3e	75	600	10.0	25	---
24:						
Pits	8s	---	---	---	---	---
Udorthents.						
25:						
Poarch	2e	80	650	5.5	---	---
26:						
Ruston	1	75	675	12.5	30	---
27:						
Ruston	2e	70	650	12.0	30	---
28:						
Ruston	3e	65	600	12.0	25	---
29:						
Saucier	2e	85	---	9.0	30	8.5
30:						
Saucier	3e	75	---	8.5	25	8.0
31:						
Saucier	3e	75	---	8.5	25	8.0
32:						
Saucier	3e	85	---	9.0	30	8.5
Susquehanna	6e	---	---	---	---	6.5
33:						
Smithdale	4e	55	400	9.0	25	---
34:						
Smithdale	7e	---	---	---	---	---
35:						
Smithton	5w	---	---	---	---	---
36:						
Smithton	4w	---	---	---	---	---
Harleston	2w	90	---	11.0	35	---
37:						
Susquehanna	4e	---	---	---	20	7.5

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Improved bermudagrass	Soybeans	Tall fescue
		Bu	*Lbs*	*AUM*	*Bu*	*AUM*
38:						
Susquehanna	6e	---	---	---	---	6.5
39:						
Susquehanna	4e	---	---	---	20	7.5
40:						
Troup	4s	55	450	7.3	22	---
W:						
Water.						

Table 6.--Forestland Management and Productivity

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									cu ft/
1:									
Annemaine	9W	Slight	Moderate	Slight	Slight	Moderate	Loblolly pine	90	114
							Shortleaf pine	70	114
							Slash pine	90	143
							Yellow poplar	90	86
							Sweetgum	90	86
							American sycamore	90	100
2:									
Atmore	8W	Slight	Severe	Moderate	Slight	Severe	Loblolly pine	80	129
							Slash pine	90	157
							Longleaf pine	70	86
							Sweetgum	80	---
3:									
Benndale	10A	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	94	143
							Longleaf pine	79	100
							Slash pine	94	172
4:									
Benndale	10A	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	94	143
							Longleaf pine	79	100
							Slash pine	94	172
5:									
Benndale	10A	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	94	143
							Longleaf pine	79	100
							Slash pine	94	172
6:									
Benndale	10A	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	95	143
							Longleaf pine	80	100
							Slash pine	95	172
7:									
Escambia	9W	Slight	Moderate	Slight	Moderate	Slight	Loblolly pine	90	129
							Longleaf pine	80	100
							Slash pine	90	157
							Sweetgum	90	100

Table 6.--Forestland Management and Productivity--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									cu ft/
8:									
Escambia	9W	Slight	Moderate	Slight	Moderate	Slight	Loblolly pine	90	129
							Longleaf pine	80	100
							Slash pine	90	157
							Sweetgum	90	100
9:									
Eustis	8R	Severe	Moderate	Moderate	Slight	Moderate	Loblolly pine	80	114
							Longleaf pine	65	72
10:									
Eustis	8S	Slight	Moderate	Moderate	Slight	Moderate	Loblolly pine	80	114
							Longleaf pine	65	72
11:									
Harleston	9W	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	90	129
							Shortleaf pine	80	129
							Sweetgum	75	72
12:									
Jena	11W	Slight	Severe	Moderate	Slight	Moderate	Loblolly pine	100	157
							Sweetgum	90	100
							Water oak	80	72
							Slash pine	100	---
Nugent	9S	Slight	Moderate	Moderate	Slight	Slight	Loblolly pine	90	129
							Slash pine	90	157
							Sweetgum	95	114
							Water oak	85	86
							Willow oak	85	86
13:									
Johnston	7W	Slight	Severe	Severe	Severe	Severe	Bald cypress	---	---
							Swamp tupelo	---	---
							Water tupelo	---	---
							Water oak	90	100
							Loblolly pine	100	172
							Sweetgum	95	114

Table 6.--Forestland Management and Productivity--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									cu ft/
13:									
Croatan	6W	Slight	Severe	Severe	Severe	Severe	Bald cypress	---	---
							Red maple	---	---
							Swamp tupelo	---	---
							Sweetgum	---	---
							Water tupelo	60	86
14:									
Latonia	9A	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	70	86
							Slash pine	90	157
15:									
Lucedale	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	75	86
							Slash pine	90	157
16:									
Lucy	8S	Slight	Moderate	Moderate	Slight	Moderate	Loblolly pine	80	114
							Longleaf pine	70	86
17:									
Malbis	9A	Slight	Slight	Slight	---	---	Loblolly pine	90	129
							Longleaf pine	80	100
							Slash pine	90	157
18:									
Malbis	9A	Slight	Slight	Slight	---	---	Loblolly pine	90	129
							Longleaf pine	80	100
							Slash pine	90	157
19:									
Malbis	9A	Slight	Slight	Slight	---	---	Loblolly pine	90	129
							Slash pine	90	157
							Longleaf pine	80	100
20:									
McLaurin	9A	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	72	86
							Slash pine	90	157

Table 6.--Forestland Management and Productivity--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									cu ft/
21:									
McLaurin	9A	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	72	86
							Slash pine	90	157
22:									
McLaurin	9A	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	72	86
							Slash pine	90	157
23:									
McLaurin	9A	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	70	86
							Slash pine	90	157
24:									
Pits.									
Udorthents.									
25:									
Poarch	9A	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	90	129
							Longleaf pine	73	86
							Slash pine	90	157
26:									
Ruston	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine	90	129
							Slash pine	90	172
							Longleaf pine	75	86
27:									
Ruston	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine	90	129
							Slash pine	90	172
							Longleaf pine	75	86
28:									
Ruston	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine	90	129
							Slash pine	90	172
							Longleaf pine	75	86
29:									
Saucier	9W	Slight	Moderate	Slight	Slight	Moderate	Loblolly pine	90	114
							Longleaf pine	60	57
							Slash pine	80	143

Table 6.--Forestland Management and Productivity--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									cu ft/
30:									
Saucier	9W	Slight	Moderate	Slight	Slight	Moderate	Loblolly pine	90	114
							Longleaf pine	60	57
							Slash pine	80	143
31:									
Saucier	9W	Slight	Moderate	Slight	Slight	Moderate	Loblolly pine	90	114
							Longleaf pine	60	57
							Slash pine	80	143
32:									
Saucier	9W	Slight	Moderate	Slight	Slight	Moderate	Loblolly pine	90	114
							Longleaf pine	60	57
							Slash pine	80	143
Susquehanna	8C	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	80	114
							shortleaf pine	70	100
33:									
Smithdale	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	70	72
							Slash pine	85	157
34:									
Smithdale	9R	Moderate	Moderate	Slight	Slight	Slight	Loblolly pine	90	129
							Longleaf pine	70	72
							Slash pine	85	157
35:									
Smithton	9W	Slight	Moderate	Moderate	Severe	Severe	Loblolly pine	85	129
							Slash pine	85	114
							Sweetgum	86	100
							Cherrybark oak	85	100
							Water oak	85	86
36:									
Smithton	9W	Slight	Moderate	Moderate	Severe	Severe	Loblolly pine	85	129
							Slash pine	85	114
							Sweetgum	85	100
							Cherrybark oak	85	100
							Water oak	85	86

Table 6.--Forestland Management and Productivity--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									cu ft/
36:									
Harleston	9W	Slight	Slight	Slight	Slight	Moderate	Loblolly pine	90	129
							Slash pine	90	129
							Sweetgum	75	72
37:									
Susquehanna	8C	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	80	114
							Shortleaf pine	70	100
38:									
Susquehanna	8C	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	80	114
							Shortleaf pine	70	100
39:									
Susquehanna	8C	Slight	Moderate	Slight	Slight	Slight	Loblolly pine	78	114
							Shortleaf pine	68	100
40:									
Troup	8S	Slight	Moderate	Moderate	Slight	Moderate	Loblolly pine	80	114
							Longleaf pine	70	86
							Slash pine	84	157
W:									
Water.									

Table 7a.--Recreation (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Annemaine	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Slow water movement	0.96	Slow water movement	0.96
		Slow water movement	0.96	Depth to saturated zone	0.19	Flooding	0.60
		Depth to saturated zone	0.39			Depth to saturated zone	0.39
2:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3:							
Benndale	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
4:							
Benndale	90	Not limited		Not limited		Very limited	
						Slope	1.00
5:							
Benndale	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
6:							
Benndale	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
7:							
Escambia	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
8:							
Escambia	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
9:							
Eustis	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
10:							
Eustis	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
						Slope	0.50
11:							
Harleston	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Gravel content	0.22

Table 7a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12:							
Jena	43	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Nugent	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00	Too sandy	1.00
		Too sandy	1.00	Flooding	0.40	Flooding	1.00
						Gravel content	0.92
13:							
Johnston	47	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
Croatan	39	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Organic matter content	1.00	Organic matter content	1.00
		Organic matter content	1.00	Too acid	1.00	Flooding	1.00
		Too acid	1.00	Flooding	0.40	Too acid	1.00
14:							
Latonia	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
15:							
Lucedale	90	Not limited		Not limited		Not limited	
16:							
Lucy	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
						Slope	0.50
17:							
Malbis	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	0.50
						Slow water movement	0.21
18:							
Malbis	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	0.50
						Slow water movement	0.21
19:							
Malbis	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
20:							
Mclaurin	90	Not limited		Not limited		Not limited	
21:							
Mclaurin	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
22:							
Mclaurin	90	Not limited		Not limited		Very limited	
						Slope	1.00

Table 7a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23:							
Mclaurin	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
24:							
Pits	75	Not rated		Not rated		Not rated	
Udorthents	23	Not rated		Not rated		Not rated	
25:							
Poarch	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
26:							
Ruston	90	Not limited		Not limited		Not limited	
27:							
Ruston	90	Not limited		Not limited		Not limited	
28:							
Ruston	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
29:							
Saucier	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.50
						Gravel content	0.08
30:							
Saucier	90	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
						Slow water movement	0.96
						Gravel content	0.08
31:							
Saucier	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.88
						Gravel content	0.08
32:							
Saucier	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.50
						Gravel content	0.08
Susquehanna	40	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
						Slope	0.88
33:							
Smithdale	95	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00

Table 7a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34:							
Smithdale	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
35:							
Smithton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
36:							
Smithton	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
Harleston	40	Not limited		Not limited		Somewhat limited	
						Gravel content	0.22
37:							
Susquehanna	90	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
						Slope	0.50
38:							
Susquehanna	95	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
39:							
Susquehanna	90	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
						Slope	0.88
40:							
Troup	90	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.81	Too sandy	0.81	Slope	1.00
						Too sandy	0.81
W:							
Water	100	Not rated		Not rated		Not rated	

Table 7b.--Recreation (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Annemaine	90	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
						Depth to saturated zone	0.19
2:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3:							
Benndale	90	Not limited		Not limited		Not limited	
4:							
Benndale	90	Not limited		Not limited		Not limited	
5:							
Benndale	90	Not limited		Not limited		Somewhat limited	
						Slope	0.16
6:							
Benndale	90	Not limited		Not limited		Not limited	
7:							
Escambia	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
8:							
Escambia	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
9:							
Eustis	90	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.87	Too sandy	0.87	Slope	1.00
						Droughty	0.31
10:							
Eustis	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Droughty	0.31
11:							
Harleston	90	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
12:							
Jena	43	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
Nugent	35	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Droughty	0.01

Table 7b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13:							
Johnston	47	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
Croatan	39	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
						Too acid	1.00
14:							
Latonia	90	Not limited		Not limited		Not limited	
15:							
Lucedale	90	Not limited		Not limited		Not limited	
16:							
Lucy	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.84	Too sandy	0.84		
17:							
Malbis	90	Not limited		Not limited		Not limited	
18:							
Malbis	90	Not limited		Not limited		Not limited	
19:							
Malbis	90	Not limited		Not limited		Not limited	
20:							
Mclaurin	90	Not limited		Not limited		Not limited	
21:							
Mclaurin	90	Not limited		Not limited		Not limited	
22:							
Mclaurin	90	Not limited		Not limited		Not limited	
23:							
Mclaurin	90	Not limited		Not limited		Not limited	
24:							
Pits	75	Not rated		Not rated		Not rated	
Udorthents	23	Not rated		Not rated		Not rated	
25:							
Poarch	90	Not limited		Not limited		Not limited	
26:							
Ruston	90	Not limited		Not limited		Not limited	
27:							
Ruston	90	Not limited		Not limited		Not limited	

Table 7b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28:							
Ruston	90	Not limited		Not limited		Not limited	
29:							
Saucier	90	Not limited		Not limited		Not limited	
30:							
Saucier	90	Not limited		Not limited		Not limited	
31:							
Saucier	90	Not limited		Not limited		Not limited	
32:							
Saucier	40	Not limited		Not limited		Not limited	
Susquehanna	40	Not limited		Not limited		Not limited	
33:							
Smithdale	95	Not limited		Not limited		Somewhat limited Slope	0.63
34:							
Smithdale	95	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
35:							
Smithton	90	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
36:							
Smithton	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Harleston	40	Not limited		Not limited		Not limited	
37:							
Susquehanna	90	Not limited		Not limited		Not limited	
38:							
Susquehanna	95	Not limited		Not limited		Somewhat limited Slope	0.16
39:							
Susquehanna	90	Not limited		Not limited		Not limited	
40:							
Troup	90	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Somewhat limited Droughty	0.01
W:							
Water	100	Not rated		Not rated		Not rated	

Table 8.--Wildlife Habitat

[See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable]

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Forestland wildlife	Wetland wildlife
1: Annemaine----	Good	Good	Good	Good	Good	Good	Good	Good	Good	Poor
2: Atmore-------	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
3: Benndale-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
4: Benndale-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
5: Benndale-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
6: Benndale-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
7: Escambia-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8: Escambia-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
9: Eustis-------	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
10: Eustis-------	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
11: Harleston----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
12: Jena---------	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor
Nugent-------	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
13: Johnston-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Croatan.										
14: Latonia------	Good	Good	Good	Good	Poor	Very poor	Very poor	Good	Good	Very poor

Table 8.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Forestland wildlife	Wetland wildlife
15: Lucedale-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
16: Lucy---------	Poor	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
17: Malbis-------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
18: Malbis-------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
19: Malbis-------	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
20: Mclaurin-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
21: Mclaurin-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
22: Mclaurin-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
23: Mclaurin-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
24: Pits--------- Udorthents.	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
25: Poarch-------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
26: Ruston-------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
27: Ruston-------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
28: Ruston-------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
29: Saucier------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor

Table 8.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Forestland wildlife	Wetland wildlife
30:										
Saucier------	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
31:										
Saucier------	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
32:										
Saucier------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Susquehanna--	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
33:										
Smithdale----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
34:										
Smithdale----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
35:										
Smithton-----	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair
36:										
Smithton-----	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair
Harleston----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
37:										
Susquehanna--	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
38:										
Susquehanna--	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
39:										
Susquehanna--	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
40:										
Troup--------	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
W:										
Water.										

Table 9a.--Building Site Development (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Annemaine	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
2:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3:							
Benndale	90	Not limited		Not limited		Not limited	
4:							
Benndale	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
5:							
Benndale	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
6:							
Benndale	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
7:							
Escambia	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
8:							
Escambia	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
9:							
Eustis	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
10:							
Eustis	90	Not limited		Not limited		Not limited	
11:							
Harleston	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.99		
12:							
Jena	43	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12:							
Nugent	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.24		
13:							
Johnston	47	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
Croatan	39	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00			Organic matter content	1.00
14:							
Latonia	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
15:							
Lucedale	90	Not limited		Not limited		Not limited	
16:							
Lucy	90	Not limited		Not limited		Not limited	
17:							
Malbis	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
18:							
Malbis	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
19:							
Malbis	90	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.90	Slope	0.12
20:							
McLaurin	90	Not limited		Not limited		Not limited	
21:							
McLaurin	90	Not limited		Not limited		Not limited	
22:							
McLaurin	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
23:							
McLaurin	90	Not limited		Not limited		Not limited	

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Pits	75	Not rated		Not rated		Not rated	
Udorthents	23	Not rated		Not rated		Not rated	
25:							
Poarch	90	Not limited		Somewhat limited Depth to saturated zone	0.73	Not limited	
26:							
Ruston	90	Not limited		Not limited		Not limited	
27:							
Ruston	90	Not limited		Not limited		Not limited	
28:							
Ruston	90	Not limited		Not limited		Not limited	
29:							
Saucier	90	Not limited		Somewhat limited Depth to saturated zone	0.90	Not limited	
30:							
Saucier	90	Not limited		Somewhat limited Depth to saturated zone	0.90	Somewhat limited Slope	0.88
31:							
Saucier	90	Not limited		Somewhat limited Depth to saturated zone	0.90	Somewhat limited Slope	0.12
32:							
Saucier	40	Not limited		Somewhat limited Depth to saturated zone	0.90	Not limited	
Susquehanna	40	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell Slope	1.00 0.12
33:							
Smithdale	95	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
34:							
Smithdale	95	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
35:							
Smithton	90	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
36:							
Smithton	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Harleston	40	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
37:							
Susquehanna	90	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
38:							
Susquehanna	95	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
39:							
Susquehanna	90	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.12
40:							
Troup	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
W:							
Water	100	Not rated		Not rated		Not rated	

Table 9b.--Building Site Development (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Annemaine	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Shrink-swell	0.50	Flooding	0.60	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Too clayey	0.28		
				Cutbanks cave	0.10		
2:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
3:							
Benndale	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
4:							
Benndale	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
5:							
Benndale	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16
				Cutbanks cave	0.10		
6:							
Benndale	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
7:							
Escambia	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
8:							
Escambia	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
9:							
Eustis	90	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.46
10:							
Eustis	90	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.85

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
11:							
Harleston	90	Very limited Flooding	 1.00	Somewhat limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Somewhat limited Flooding	 0.60
12:							
Jena	43	Very limited Flooding	 1.00	Somewhat limited Flooding Cutbanks cave	 0.80 0.10	Very limited Flooding	 1.00
Nugent	35	Very limited Flooding	 1.00	Very limited Cutbanks cave Flooding Depth to saturated zone	 1.00 0.80 0.24	Very limited Flooding Droughty	 1.00 0.01
13:							
Johnston	47	Very limited Depth to saturated zone Flooding Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Flooding	 1.00 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00
Croatan	39	Very limited Depth to saturated zone Subsidence Flooding	 1.00 1.00 1.00	Very limited Depth to saturated zone Organic matter content Flooding Cutbanks cave	 1.00 1.00 0.80 0.10	Very limited Flooding Organic matter content Depth to saturated zone Too acid	 1.00 1.00 1.00 1.00
14:							
Latonia	90	Very limited Flooding	 1.00	Very limited Cutbanks cave Flooding	 1.00 0.60	Somewhat limited Flooding	 0.60
15:							
Lucedale	90	Not limited		Somewhat limited Cutbanks cave	 0.10	Not limited	
16:							
Lucy	90	Not limited		Very limited Cutbanks cave	 1.00	Not limited	
17:							
Malbis	90	Not limited		Somewhat limited Depth to saturated zone Cutbanks cave	 0.95 0.10	Not limited	
18:							
Malbis	90	Not limited		Somewhat limited Depth to saturated zone Cutbanks cave	 0.95 0.10	Not limited	

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19:							
Malbis	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
20:							
Mclaurin	90	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
21:							
Mclaurin	90	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
22:							
Mclaurin	90	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
23:							
Mclaurin	90	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
24:							
Pits	75	Not rated		Not rated		Not rated	
Udorthents	23	Not rated		Not rated		Not rated	
25:							
Poarch	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.73		
				Cutbanks cave	0.10		
26:							
Ruston	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
27:							
Ruston	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
28:							
Ruston	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
29:							
Saucier	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
				Too clayey	0.03		
30:							
Saucier	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
				Too clayey	0.03		

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31:							
Saucier	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
				Too clayey	0.03		
32:							
Saucier	40	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
				Too clayey	0.03		
Susquehanna	40	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Too clayey	0.28		
				Cutbanks cave	0.10		
33:							
Smithdale	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
				Cutbanks cave	0.10		
34:							
Smithdale	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10		
35:							
Smithton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
36:							
Smithton	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
				Cutbanks cave	0.10		
Harleston	40	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
				Flooding	0.60		
				Cutbanks cave	0.10		
37:							
Susquehanna	90	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Too clayey	0.28		
				Cutbanks cave	0.10		
38:							
Susquehanna	95	Very limited		Somewhat limited		Somewhat limited	
		Shrink-swell	1.00	Too clayey	0.28	Slope	0.16
		Slope	0.16	Slope	0.16		
				Cutbanks cave	0.10		

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
39:							
Susquehanna	90	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Too clayey	0.28		
				Cutbanks cave	0.10		
40:							
Troup	90	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.01
W:							
Water	100	Not rated		Not rated		Not rated	

Table 10a.--Sanitary Facilities (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:						
Annemaine	Very limited -wetness (very limited) -flooding (very limited) -percs slowly (limited)	 1.00 1.00 0.93	Very limited -flooding (very limited) -wetness (very limited)	 1.00 1.00	Very limited -flooding (very limited) -wetness (limited) -too clayey (limited)	 1.00 0.99 0.75
2:						
Atmore	Very limited -wetness (very limited) -percs slowly (limited)	 1.00 0.73	Very limited -wetness (very limited) -seepage (moderately limited)	 1.00 0.53	Very limited -wetness (very limited) -too acid (moderately limited) -too clayey (slightly limited)	 1.00 0.54 0.02
3:						
Benndale	Slightly limited -percs slowly (slightly limited)	 0.24	Moderately limited -seepage (moderately limited) -slope (slightly limited)	 0.53 0.08	Limited -seepage (limited) -too acid (slightly limited)	 0.79 0.30
4:						
Benndale	Slightly limited -percs slowly (slightly limited)	 0.24	Very limited -seepage (very limited) -slope (very limited)	 1.00 1.00	Limited -seepage (limited) -too acid (slightly limited)	 0.79 0.30
5:						
Benndale	Slightly limited -percs slowly (slightly limited) -slope (slightly limited)	 0.24 0.16	Very limited -slope (very limited) -seepage (moderately limited)	 1.00 0.53	Limited -seepage (limited) -too acid (slightly limited) -slope (slightly limited)	 0.79 0.30 0.16
6:						
Benndale	Slightly limited -percs slowly (slightly limited)	 0.24	Very limited -seepage (very limited) -slope (limited)	 1.00 0.66	Limited -seepage (limited) -too acid (slightly limited)	 0.79 0.30
7:						
Escambia	Very limited -wetness (very limited) -percs slowly (limited)	 1.00 0.78	Very limited -wetness (very limited) -seepage (moderately limited)	 1.00 0.53	Limited -wetness (limited) -too acid (moderately limited)	 0.99 0.54

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8:						
Escambia	Very limited -wetness (very limited) -percs slowly (limited)	 1.00 0.78	Very limited -wetness (very limited) -seepage (moderately limited) -slope (slightly limited)	 1.00 0.53 0.08	Limited -wetness (limited) -too acid (moderately limited)	 0.99 0.54
9:						
Eustis	Very limited -poor filter (very limited) -slope (very limited)	 1.00 1.00	Very limited -slope (very limited) -seepage (very limited)	 1.00 1.00	Very limited -seepage (very limited) -slope (very limited) -too sandy (moderately limited)	 1.00 1.00 0.60
10:						
Eustis	Very limited -poor filter (very limited)	 1.00	Very limited -seepage (very limited) -slope (moderately limited)	 1.00 0.31	Very limited -seepage (very limited) -too sandy (moderately limited) -too acid (slightly limited)	 1.00 0.60 0.30
11:						
Harleston	Very limited -wetness (very limited) -flooding (very limited) -percs slowly (slightly limited)	 1.00 1.00 0.24	Very limited -flooding (very limited) -wetness (very limited) -seepage (moderately limited)	 1.00 1.00 0.53	Very limited -flooding (very limited) -wetness (limited) -too acid (slightly limited)	 1.00 0.79 0.30
12:						
Jena	Very limited -flooding (very limited) -percs slowly (slightly limited)	 1.00 0.24	Very limited -flooding (very limited) -seepage (very limited)	 1.00 1.00	Very limited -flooding (very limited) -seepage (limited) -too acid (slightly limited)	 1.00 0.79 0.30
Nugent	Very limited -flooding (very limited) -wetness (moderately limited)	 1.00 0.37	Very limited -flooding (very limited) -seepage (very limited) -wetness (slightly limited)	 1.00 1.00 0.02	Very limited -flooding (very limited) -seepage (limited) -too sandy (moderately limited)	 1.00 0.79 0.60
13:						
Johnston	Very limited -ponded (wetness) (very limited) -wetness (very limited) -flooding (very limited)	 1.00 1.00 1.00	Very limited -flooding (very limited) -ponded (wetness) (very limited) -seepage (very limited)	 1.00 1.00 1.00	Very limited -ponded (wetness) (very limited) -wetness (very limited) -flooding (very limited)	 1.00 1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13:						
Croatan	Very limited		Very limited		Very limited	
	-wetness	1.00	-flooding	1.00	-wetness	1.00
	(very limited)		(very limited)		(very limited)	
	-flooding	1.00	-seepage	1.00	-flooding	1.00
	(very limited)		(very limited)		(very limited)	
			-wetness	0.84	-seepage	0.70
			(limited)		(limited)	
14:						
Latonia	Not limited		Very limited		Very limited	
			-seepage	1.00	-seepage	1.00
			(very limited)		(very limited)	
					-too sandy	0.60
					(moderately limited)	
					-too acid	0.30
					(slightly limited)	
15:						
Lucedale	Slightly limited		Moderately limited		Slightly limited	
	-percs slowly	0.24	-seepage	0.53	-too acid	0.30
	(slightly limited)		(moderately limited)		(slightly limited)	
16:						
Lucy	Slightly limited		Very limited		Slightly limited	
	-percs slowly	0.24	-seepage	1.00	-too acid	0.30
	(slightly limited)		(very limited)		(slightly limited)	
			-slope	0.31	-too clayey	0.21
			(moderately limited)		(slightly limited)	
17:						
Malbis	Limited		Very limited		Moderately limited	
	-wetness	0.98	-wetness	1.00	-wetness	0.59
	(limited)		(very limited)		(moderately limited)	
	-percs slowly	0.73	-seepage	0.53	-too acid	0.30
	(limited)		(moderately limited)		(slightly limited)	
			-slope	0.31	-too clayey	0.02
			(moderately limited)		(slightly limited)	
18:						
Malbis	Limited		Very limited		Moderately limited	
	-wetness	0.98	-wetness	1.00	-wetness	0.59
	(limited)		(very limited)		(moderately limited)	
	-percs slowly	0.73	-seepage	0.53	-too acid	0.30
	(limited)		(moderately limited)		(slightly limited)	
			-slope	0.31	-too clayey	0.02
			(moderately limited)		(slightly limited)	
19:						
Malbis	Limited		Very limited		Moderately limited	
	-wetness	0.89	-wetness	1.00	-wetness	0.52
	(limited)		(very limited)		(moderately limited)	
	-percs slowly	0.24	-slope	0.66	-too acid	0.30
	(slightly limited)		(limited)		(slightly limited)	
			-seepage	0.53	-too clayey	0.02
			(moderately limited)		(slightly limited)	
20:						
Mclaurin	Slightly limited		Very limited		Slightly limited	
	-percs slowly	0.24	-seepage	1.00	-too acid	0.30
	(slightly limited)		(very limited)		(slightly limited)	

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21:						
Mclaurin	Slightly limited -percs slowly (slightly limited)	0.24	Very limited -seepage (very limited) -slope (slightly limited)	1.00 0.08	Slightly limited -too acid (slightly limited)	0.30
22:						
Mclaurin	Slightly limited -percs slowly (slightly limited)	0.24	Very limited -seepage (very limited) -slope (very limited)	1.00 1.00	Slightly limited -too acid (slightly limited)	0.30
23:						
Mclaurin	Slightly limited -percs slowly (slightly limited)	0.24	Very limited -seepage (very limited) -slope (moderately limited)	1.00 0.31	Slightly limited -too acid (slightly limited)	0.30
24:						
Pits	Not rated		Not rated		Not rated	
Udorthents	Not rated		Not rated		Not rated	
25:						
Poarch	Limited -percs slowly (limited) -wetness (limited)	0.73 0.70	Limited -wetness (limited) -seepage (moderately limited) -slope (slightly limited)	0.92 0.53 0.08	Moderately limited -wetness (moderately limited) -too acid (slightly limited)	0.38 0.30
26:						
Ruston	Slightly limited -percs slowly (slightly limited)	0.24	Moderately limited -seepage (moderately limited)	0.53	Slightly limited -too acid (slightly limited)	0.12
27:						
Ruston	Slightly limited -percs slowly (slightly limited)	0.24	Moderately limited -seepage (moderately limited)	0.53	Slightly limited -too acid (slightly limited)	0.12
28:						
Ruston	Slightly limited -percs slowly (slightly limited)	0.24	Moderately limited -seepage (moderately limited) -slope (moderately limited)	0.53 0.31	Slightly limited -too acid (slightly limited)	0.12
29:						
Saucier	Limited -percs slowly (limited) -wetness (limited)	0.93 0.89	Very limited -wetness (very limited) -seepage (moderately limited) -slope (moderately limited)	1.00 0.53 0.31	Limited -too clayey (limited) -too acid (moderately limited) -wetness (moderately limited)	0.65 0.54 0.52

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
30:						
Saucier	Limited -percs slowly (limited) -wetness (limited)	 0.93 0.89	Very limited -wetness (very limited) -slope (very limited) -seepage (moderately limited)	 1.00 1.00 0.53	Limited -too clayey (limited) -too acid (moderately limited) -wetness (moderately limited)	 0.65 0.54 0.52
31:						
Saucier	Limited -percs slowly (limited) -wetness (limited)	 0.93 0.89	Very limited -wetness (very limited) -slope (limited) -seepage (moderately limited)	 1.00 0.66 0.53	Limited -too clayey (limited) -too acid (moderately limited) -wetness (moderately limited)	 0.65 0.54 0.52
32:						
Saucier	Limited -percs slowly (limited) -wetness (limited)	 0.93 0.89	Very limited -wetness (very limited) -seepage (moderately limited) -slope (moderately limited)	 1.00 0.53 0.31	Limited -too clayey (limited) -too acid (moderately limited) -wetness (moderately limited)	 0.65 0.54 0.52
Susquehanna	Very limited -percs slowly (very limited)	 1.00	Limited -slope (limited)	 0.66	Limited -too clayey (limited) -too acid (slightly limited)	 0.75 0.30
33:						
Smithdale	Limited -slope (limited) -percs slowly (slightly limited)	 0.63 0.24	Very limited -slope (very limited) -seepage (very limited)	 1.00 1.00	Limited -seepage (limited) -slope (limited) -too acid (slightly limited)	 0.79 0.63 0.30
34:						
Smithdale	Very limited -slope (very limited) -percs slowly (slightly limited)	 1.00 0.24	Very limited -slope (very limited) -seepage (very limited)	 1.00 1.00	Very limited -slope (very limited) -seepage (limited) -too acid (slightly limited)	 1.00 0.79 0.30
35:						
Smithton	Very limited -wetness (very limited) -flooding (very limited) -percs slowly (limited)	 1.00 1.00 0.73	Very limited -flooding (very limited) -wetness (very limited) -seepage (moderately limited)	 1.00 1.00 0.53	Very limited -wetness (very limited) -flooding (very limited) -too acid (slightly limited)	 1.00 1.00 0.30

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Septic tank absorption field		Sewage lagoons		Sanitary landfill (trench)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
36:						
Smithton	Very limited -wetness (very limited) -flooding (very limited) -percs slowly (limited)	 1.00 1.00 0.73	Very limited -flooding (very limited) -wetness (very limited) -seepage (moderately limited)	 1.00 1.00 0.53	Very limited -wetness (very limited) -flooding (very limited) -too acid (slightly limited)	 1.00 1.00 0.30
Harleston	Very limited -wetness (very limited) -percs slowly (slightly limited)	 1.00 0.24	Very limited -wetness (very limited) -seepage (moderately limited)	 1.00 0.53	Limited -wetness (limited) -too acid (slightly limited)	 0.79 0.30
37:						
Susquehanna	Very limited -percs slowly (very limited)	 1.00	Moderately limited -slope (moderately limited)	 0.31	Limited -too clayey (limited) -too acid (slightly limited)	 0.75 0.30
38:						
Susquehanna	Very limited -percs slowly (very limited) -slope (slightly limited)	 1.00 0.16	Very limited -slope (very limited)	 1.00	Limited -too clayey (limited) -too acid (slightly limited) -slope (slightly limited)	 0.75 0.30 0.16
39:						
Susquehanna	Very limited -percs slowly (very limited)	 1.00	Limited -slope (limited)	 0.66	Limited -too clayey (limited) -too acid (slightly limited)	 0.75 0.30
40:						
Troup	Slightly limited -percs slowly (slightly limited)	 0.24	Very limited -seepage (very limited) -slope (very limited)	 1.00 1.00	Moderately limited -too sandy (moderately limited) -too acid (slightly limited)	 0.60 0.12
W:						
Water	Not rated		Not rated		Not rated	

Table 10b.--Sanitary Facilities (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1:				
Annemaine	Very limited -flooding (very limited)	1.00	Moderately limited -too clayey (moderately limited)	0.53
	-wetness (limited)	0.80	-wetness (moderately limited)	0.50
			-too acid (slightly limited)	0.30
2:				
Atmore	Very limited -wetness (very limited)	1.00	Very limited -wetness (very limited)	1.00
			-too acid (moderately limited)	0.54
3:				
Benndale	Not limited		Slightly limited -too acid (slightly limited)	0.30
4:				
Benndale	Not limited		Slightly limited -too acid (slightly limited)	0.30
5:				
Benndale	Slightly limited -slope (slightly limited)	0.16	Slightly limited -too acid (slightly limited)	0.30
			-slope (slightly limited)	0.16
6:				
Benndale	Not limited		Slightly limited -too acid (slightly limited)	0.30
7:				
Escambia	Limited -wetness (limited)	0.80	Moderately limited -too acid (moderately limited)	0.54
			-wetness (moderately limited)	0.50
8:				
Escambia	Limited -wetness (limited)	0.80	Moderately limited -too acid (moderately limited)	0.54
			-wetness (moderately limited)	0.50

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value
9:				
Eustis	Very limited -seepage (very limited) -slope (very limited)	 1.00 1.00 	Very limited -seepage (very limited) -slope (very limited) -too sandy (moderately limited)	 1.00 1.00 0.60
10:				
Eustis	Very limited -seepage (very limited)	 1.00 	Very limited -seepage (very limited) -too sandy (moderately limited) -too acid (slightly limited)	 1.00 0.60 0.30
11:				
Harleston	Very limited -flooding (very limited) -wetness (limited)	 1.00 0.60 	Moderately limited -wetness (moderately limited) -too acid (slightly limited)	 0.40 0.30
12:				
Jena	Very limited -flooding (very limited) -seepage (limited)	 1.00 0.76 	Slightly limited -too acid (slightly limited)	 0.30
Nugent	Very limited -flooding (very limited) -seepage (limited)	 1.00 0.76 	Moderately limited -too sandy (moderately limited) -seepage (moderately limited)	 0.60 0.52
13:				
Johnston	Very limited -flooding (very limited) -wetness (very limited) -ponded (wetness) (very limited)	 1.00 1.00 1.00 	Very limited -ponded (wetness) (very limited) -wetness (very limited) -hard to pack (limited)	 1.00 1.00 0.70
Croatan	Very limited -flooding (very limited) -wetness (very limited) -seepage (limited)	 1.00 1.00 0.64 	Very limited -wetness (very limited) -too acid (slightly limited) -seepage (slightly limited)	 1.00 0.24 0.16

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value
14:				
Latonia	Very limited -seepage (very limited)	1.00	Very limited -seepage (very limited) -too sandy (moderately limited) -too acid (slightly limited)	1.00 0.60 0.30
15:				
Lucedale	Not limited		Slightly limited -too acid (slightly limited)	 0.30
16:				
Lucy	Very limited -seepage (very limited)	1.00	Moderately limited -seepage (moderately limited) -too acid (slightly limited) -too clayey (slightly limited)	 0.52 0.30 0.08
17:				
Malbis	Slightly limited -wetness (slightly limited)	0.29	Slightly limited -too acid (slightly limited) -wetness (slightly limited)	 0.30 0.28
18:				
Malbis	Slightly limited -wetness (slightly limited)	0.29	Slightly limited -too acid (slightly limited) -wetness (slightly limited)	 0.30 0.28
19:				
Malbis	Slightly limited -wetness (slightly limited)	0.22	Slightly limited -too acid (slightly limited) -wetness (slightly limited)	 0.30 0.14
20:				
Mclaurin	Limited -seepage (limited)	0.76	Slightly limited -too acid (slightly limited)	 0.30
21:				
Mclaurin	Limited -seepage (limited)	0.76	Slightly limited -too acid (slightly limited)	 0.30
22:				
Mclaurin	Limited -seepage (limited)	0.76	Slightly limited -too acid (slightly limited)	 0.30

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value
23:				
Mclaurin	Limited -seepage (limited)	0.76	Slightly limited -too acid (slightly limited)	0.30
24:				
Pits	Not rated		Not rated	
Udorthents	Not rated		Not rated	
25:				
Poarch	Slightly limited -wetness (slightly limited)	0.08	Slightly limited -too acid (slightly limited)	0.30
26:				
Ruston	Not limited		Slightly limited -too acid (slightly limited)	0.12
27:				
Ruston	Not limited		Slightly limited -too acid (slightly limited)	0.12
28:				
Ruston	Not limited		Slightly limited -too acid (slightly limited)	0.12
29:				
Saucier	Slightly limited -wetness (slightly limited)	0.22	Moderately limited -too acid (moderately limited) -too clayey (moderately limited) -wetness (slightly limited)	0.54 0.38 0.14
30:				
Saucier	Slightly limited -wetness (slightly limited)	0.22	Moderately limited -too acid (moderately limited) -too clayey (moderately limited) -wetness (slightly limited)	0.54 0.38 0.14
31:				
Saucier	Slightly limited -wetness (slightly limited)	0.22	Moderately limited -too acid (moderately limited) -too clayey (moderately limited) -wetness (slightly limited)	0.54 0.38 0.14

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value
32:				
Saucier	Slightly limited -wetness (slightly limited)	0.22	Moderately limited -too acid (moderately limited) -too clayey (moderately limited) -wetness (slightly limited)	0.54 0.38 0.14
Susquehanna	Not limited		Limited -hard to pack (limited) -too clayey (moderately limited) -too acid (slightly limited)	 0.70 0.53 0.30
33:				
Smithdale	Limited -seepage (limited) -slope (limited)	 0.76 0.63	Limited -slope (limited) -seepage (moderately limited) -too acid (slightly limited)	 0.63 0.52 0.30
34:				
Smithdale	Very limited -slope (very limited) -seepage (limited)	 1.00 0.76	Very limited -slope (very limited) -seepage (moderately limited) -too acid (slightly limited)	 1.00 0.52 0.30
35:				
Smithton	Very limited -flooding (very limited) -wetness (very limited)	 1.00 1.00	Very limited -wetness (very limited) -too acid (slightly limited)	 1.00 0.30
36:				
Smithton	Very limited -flooding (very limited) -wetness (very limited)	 1.00 1.00	Very limited -wetness (very limited) -too acid (slightly limited)	 1.00 0.30
Harleston	Limited -wetness (limited)	 0.60	Moderately limited -wetness (moderately limited) -too acid (slightly limited)	 0.40 0.30

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Sanitary landfill (area)		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value
37:				
Susquehanna	Not limited		Limited -hard to pack (limited) -too clayey (moderately limited) -too acid (slightly limited)	 0.70 0.53 0.30
38:				
Susquehanna	Slightly limited -slope (slightly limited)	0.16	Limited -hard to pack (limited) -too clayey (moderately limited) -too acid (slightly limited)	 0.70 0.53 0.30
39:				
Susquehanna	Not limited		Limited -hard to pack (limited) -too clayey (moderately limited) -too acid (slightly limited)	 0.70 0.53 0.30
40:				
Troup	Very limited -seepage (very limited)	1.00	Very limited -seepage (very limited) -too sandy (moderately limited) -too acid (slightly limited)	 1.00 0.60 0.12
W:				
Water	Not rated		Not rated	

Table 11a.--Construction Materials (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1:					
Annemaine	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
2:					
Atmore	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3:					
Benndale	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4:					
Benndale	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
5:					
Benndale	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
6:					
Benndale	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7:					
Escambia	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8:					
Escambia	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
9:					
Eustis	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.42
		Thickest layer	0.00	Bottom layer	0.69
10:					
Eustis	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.29
		Thickest layer	0.00	Bottom layer	0.69

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
11:					
Harleston	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.04
12:					
Jena	43	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
Nugent	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.64
13:					
Johnston	47	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Croatan	39	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Organic matter content	0.00
		Organic matter content	0.00	Bottom layer	0.03
14:					
Latonia	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.10
15:					
Lucedale	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
16:					
Lucy	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.10
17:					
Malbis	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
18:					
Malbis	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
19:					
Malbis	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20:					
Mclaurin	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
21:					
Mclaurin	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
22:					
Mclaurin	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
23:					
Mclaurin	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
24:					
Pits	75	Not rated		Not rated	
Udorthents	23	Not rated		Not rated	
25:					
Poarch	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
26:					
Ruston	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
27:					
Ruston	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
28:					
Ruston	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
29:					
Saucier	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
30:					
Saucier	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
31:					
Saucier	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32:					
Saucier	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
32:					
Susquehanna	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
33:					
Smithdale	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
34:					
Smithdale	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
35:					
Smithton	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.02
		Thickest layer	0.00	Bottom layer	0.04
36:					
Smithton	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.02
		Thickest layer	0.00	Bottom layer	0.04
Harleston	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.04
37:					
Susquehanna	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
38:					
Susquehanna	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
39:					
Susquehanna	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
40:					
Troup	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.10
W:					
Water	100	Not rated		Not rated	

Table 11b.--Construction Materials (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Annemaine	90	Poor		Fair		Poor	
		Too clayey	0.00	Wetness depth	0.53	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.97	Wetness depth	0.53
		Too acid	0.32			Too acid	0.88
		Water erosion	0.99				
2:							
Atmore	90	Fair		Poor		Poor	
		Too acid	0.12	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.12			Rock fragments	0.50
		Water erosion	0.99			Too acid	0.59
3:							
Benndale	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
4:							
Benndale	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
5:							
Benndale	90	Fair		Good		Fair	
		Organic matter content low	0.05			Slope	0.84
		Too acid	0.32			Too acid	0.88
6:							
Benndale	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
7:							
Escambia	90	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.18			Too acid	0.59
8:							
Escambia	90	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.18			Too acid	0.59

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9:							
Eustis	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Slope	0.00
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
		Droughty	0.51				
10:							
Eustis	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Too acid	0.88
		Organic matter content low	0.05				
		Droughty	0.22				
		Too acid	0.32				
11:							
Harleston	90	Fair		Fair		Fair	
		Organic matter content low	0.05	Wetness depth	0.89	Too acid	0.88
		Too acid	0.12			Wetness depth	0.89
						Rock fragments	0.95
12:							
Jena	43	Fair		Good		Fair	
		Too acid	0.50			Too acid	0.88
		Organic matter content low	0.88				
		Water erosion	0.99				
Nugent	35	Not rated		Good		Not rated	
		Wind erosion	0.00			Rock fragments	0.32
		Organic matter content low	0.32				
		Too acid	0.68				
13:							
Johnston	47	Fair		Poor		Poor	
		Too acid	0.32	Wetness depth	0.00	Wetness depth	0.00
						Too acid	0.88
Croatan	39	Poor		Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.50			Organic matter content high	0.00
						Too acid	0.00
14:							
Latonia	90	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.50				
15:							
Lucedale	90	Fair		Good		Fair	
		Organic matter content low	0.08			Too acid	0.88
		Too acid	0.50				

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16:							
Lucy	90	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00				
		Too acid	0.32				
		Organic matter content low	0.88				
17:							
Malbis	90	Fair		Good		Fair	
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
18:							
Malbis	90	Fair		Good		Fair	
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
19:							
Malbis	90	Fair		Good		Fair	
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
20:							
Mclaurin	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
21:							
Mclaurin	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
22:							
Mclaurin	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				
23:							
Mclaurin	90	Fair		Good		Fair	
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
24:							
Pits	75	Not rated		Not rated		Not rated	
Udorthents	23	Not rated		Not rated		Not rated	
25:							
Poarch	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.88
		Too acid	0.32				

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
26:							
Ruston	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.98
		Too acid	0.54				
27:							
Ruston	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.98
		Too acid	0.54				
28:							
Ruston	90	Fair		Good		Fair	
		Organic matter content low	0.05			Too acid	0.98
		Too acid	0.54				
29:							
Saucier	90	Fair		Good		Fair	
		Organic matter content low	0.02			Rock fragments	0.50
		Too acid	0.12			Too acid	0.59
30:							
Saucier	90	Fair		Good		Fair	
		Organic matter content low	0.02			Rock fragments	0.50
		Too acid	0.12			Too acid	0.59
31:							
Saucier	90	Fair		Good		Fair	
		Organic matter content low	0.02			Rock fragments	0.50
		Too acid	0.12			Too acid	0.59
32:							
Saucier	40	Fair		Good		Fair	
		Organic matter content low	0.02			Rock fragments	0.50
		Too acid	0.12			Too acid	0.59
Susquehanna	40	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.12	Too clayey	0.00
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
33:							
Smithdale	95	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.37
		Too acid	0.50			Too acid	0.88
34:							
Smithdale	95	Fair		Fair		Poor	
		Organic matter content low	0.02	Slope	0.50	Slope	0.00
		Too acid	0.50			Too acid	0.88

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35:							
Smithton	90	Fair		Poor		Poor	
		Too acid	0.32	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.50			Too acid	0.88
36:							
Smithton	50	Fair		Poor		Poor	
		Too acid	0.32	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.50			Too acid	0.88
Harleston	40	Fair		Fair		Fair	
		Organic matter content low	0.05	Wetness depth	0.89	Too acid	0.88
		Too acid	0.12			Wetness depth	0.89
						Rock fragments	0.95
37:							
Susquehanna	90	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.12	Too clayey	0.00
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
38:							
Susquehanna	95	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.12	Too clayey	0.00
		Organic matter content low	0.02			Slope	0.84
		Too acid	0.50			Too acid	0.88
39:							
Susquehanna	90	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.12	Too clayey	0.00
		Organic matter content low	0.02			Too acid	0.88
		Too acid	0.50				
40:							
Troup	90	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Too sandy	0.01			Too acid	0.98
		Too acid	0.54				
		Organic matter content low	0.88				
W:							
Water	100	Not rated		Not rated		Not rated	

Table 12a.--Water Management (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Annemaine	Not limited		Moderately limited -flooding (moderately limited) -percs slowly (moderately limited)	0.60 0.40	Moderately limited -flooding (moderately limited) -percs slowly (moderately limited)	0.60 0.40
2: Atmore	Moderately limited -seepage (moderately limited)	0.53	Not limited		Moderately limited -erodes easily (moderately limited)	0.60
3: Benndale	Moderately limited -seepage (moderately limited)	0.53	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
4: Benndale	Very limited -seepage (very limited) -slope (moderately limited)	1.00 0.45	Very limited -slope (very limited)	1.00	Very limited -slope (very limited)	1.00
5: Benndale	Limited -slope (limited) -seepage (moderately limited)	0.80 0.53	Very limited -slope (very limited)	1.00	Very limited -slope (very limited)	1.00
6: Benndale	Very limited -seepage (very limited) -slope (slightly limited)	1.00 0.20	Limited -cutbanks cave (limited -slope (limited)	0.90 0.78	Limited -slope (limited)	0.78
7: Escambia	Moderately limited -seepage (moderately limited)	0.53	Not limited		Not limited	
8: Escambia	Moderately limited -seepage (moderately limited)	0.53	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
9: Eustis	Very limited -seepage (very limited) -slope (very limited)	1.00 1.00	Very limited -slope (very limited) -cutbanks cave (limited	1.00 0.90	Very limited -slope (very limited) -fast intake (limited -droughty (moderately limited)	1.00 0.90 0.31

Table 12a.--Water Management (Part 1)--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10:						
Eustis	Very limited -seepage (very limited) -slope (slightly limited)	 1.00 0.10	Limited -cutbanks cave (limited -slope (moderately limited)	 0.90 0.40	Limited -fast intake (limited -slope (moderately limited) -droughty (moderately limited)	 0.90 0.40 0.31
11:						
Harleston	Moderately limited -seepage (moderately limited)	 0.53	Moderately limited -flooding (moderately limited)	 0.60	Moderately limited -flooding (moderately limited)	 0.60
12:						
Jena	Very limited -seepage (very limited)	 1.00	Limited -cutbanks cave (limited -flooding (limited)	 0.90 0.90	Limited -flooding (limited) -erodes easily (moderately limited)	 0.90 0.60
Nugent	Very limited -seepage (very limited)	 1.00	Limited -flooding (limited)	 0.90	Limited -flooding (limited) -fast intake (limited -droughty (slightly limited)	 0.90 0.90 0.00
13:						
Johnston	Very limited -seepage (very limited)	 1.00	Very limited -ponded (wetness) (very limited) -flooding (limited)	 1.00 0.90	Very limited -ponded (wetness) (very limited) -flooding (limited)	 1.00 0.90
Croatan	Very limited -seepage (very limited)	 1.00	Limited -flooding (limited)	 0.90	Limited -flooding (limited)	 0.90
14:						
Latonia	Very limited -seepage (very limited)	 1.00	Limited -cutbanks cave (limited	 0.90	Not limited	
15:						
Lucedale	Moderately limited -seepage (moderately limited)	 0.53	Not limited		Not limited	
16:						
Lucy	Very limited -seepage (very limited) -slope (slightly limited)	 1.00 0.10	Limited -cutbanks cave (limited -slope (moderately limited)	 0.90 0.40	Limited -fast intake (limited -slope (moderately limited)	 0.90 0.40

Table 12a.--Water Management (Part 1)--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17:						
Malbis	Moderately limited -seepage (moderately limited) -slope (slightly limited)	 0.53 0.10	Moderately limited -slope (moderately limited) -percs slowly (slightly limited)	 0.40 0.15	Moderately limited -slope (moderately limited) -percs slowly (slightly limited)	 0.40 0.15
18:						
Malbis	Moderately limited -seepage (moderately limited) -slope (slightly limited)	 0.53 0.10	Moderately limited -slope (moderately limited) -percs slowly (slightly limited)	 0.40 0.15	Moderately limited -slope (moderately limited) -percs slowly (slightly limited)	 0.40 0.15
19:						
Malbis	Moderately limited -seepage (moderately limited) -slope (slightly limited)	 0.53 0.20	Limited -slope (limited)	 0.78	Limited -slope (limited)	 0.78
20:						
Mclaurin	Very limited -seepage (very limited)	 1.00	Limited -cutbanks cave (limited	 0.90	Not limited	
21:						
Mclaurin	Very limited -seepage (very limited)	 1.00	Limited -cutbanks cave (limited -slope (slightly limited)	 0.90 0.10	Slightly limited -slope (slightly limited)	 0.10
22:						
Mclaurin	Very limited -seepage (very limited) -slope (moderately limited)	 1.00 0.45	Very limited -slope (very limited) -cutbanks cave (limited	 1.00 0.90	Very limited -slope (very limited)	 1.00
23:						
Mclaurin	Very limited -seepage (very limited) -slope (slightly limited)	 1.00 0.10	Limited -cutbanks cave (limited -slope (moderately limited)	 0.90 0.40	Moderately limited -slope (moderately limited)	 0.40
24:						
Pits	Not rated		Not rated		Not rated	
Udorthents	Not rated		Not rated		Not rated	
25:						
Poarch	Moderately limited -seepage (moderately limited)	 0.53	Slightly limited -slope (slightly limited)	 0.10	Slightly limited -slope (slightly limited)	 0.10
26:						
Ruston	Moderately limited -seepage (moderately limited)	 0.53	Limited -cutbanks cave (limited	 0.90	Not limited	

Table 12a.--Water Management (Part 1)--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
27:						
Ruston	Moderately limited -seepage (moderately limited)	0.53	Limited -cutbanks cave (limited	0.90	Not limited	
28:						
Ruston	Moderately limited -seepage (moderately limited) -slope (slightly limited)	0.53 0.10	Limited -cutbanks cave (limited -slope (moderately limited)	0.90 0.40	Moderately limited -slope (moderately limited)	0.40
29:						
Saucier	Moderately limited -seepage (moderately limited) -slope (slightly limited)	0.53 0.10	Moderately limited -percs slowly (moderately limited) -slope (moderately limited)	0.40 0.40	Moderately limited -percs slowly (moderately limited) -slope (moderately limited)	0.40 0.40
30:						
Saucier	Moderately limited -seepage (moderately limited) -slope (moderately limited)	0.53 0.45	Very limited -slope (very limited) -percs slowly (moderately limited)	1.00 0.40	Very limited -slope (very limited) -percs slowly (moderately limited)	1.00 0.40
31:						
Saucier	Moderately limited -seepage (moderately limited) -slope (slightly limited)	0.53 0.20	Limited -slope (limited) -percs slowly (moderately limited)	0.78 0.40	Limited -slope (limited) -percs slowly (moderately limited)	0.78 0.40
32:						
Saucier	Moderately limited -seepage (moderately limited) -slope (slightly limited)	0.53 0.10	Moderately limited -percs slowly (moderately limited) -slope (moderately limited)	0.40 0.40	Moderately limited -percs slowly (moderately limited) -slope (moderately limited)	0.40 0.40
Susquehanna	Slightly limited -slope (slightly limited)	0.20	Very limited -percs slowly (very limited) -slope (limited)	1.00 0.78	Very limited -percs slowly (very limited) -slope (limited)	1.00 0.78
33:						
Smithdale	Very limited -seepage (very limited) -slope (limited)	1.00 0.99	Very limited -slope (very limited)	1.00	Very limited -slope (very limited)	1.00
34:						
Smithdale	Very limited -slope (very limited) -seepage (very limited)	1.00 1.00	Very limited -slope (very limited)	1.00	Very limited -slope (very limited)	1.00

Table 12a.--Water Management (Part 1)--Continued

Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35:						
Smithton	Moderately limited -seepage (moderately limited)	0.53	Limited -flooding (limited)	0.90	Limited -flooding (limited)	0.90
36:						
Smithton	Moderately limited -seepage (moderately limited)	0.53	Moderately limited -flooding (moderately limited)	0.60	Moderately limited -flooding (moderately limited)	0.60
Harleston	Moderately limited -seepage (moderately limited)	0.53	Not limited		Not limited	
37:						
Susquehanna	Slightly limited -slope (slightly limited)	0.10	Very limited -percs slowly (very limited) -slope (moderately limited)	1.00 0.40	Very limited -percs slowly (very limited) -slope (moderately limited)	1.00 0.40
38:						
Susquehanna	Limited -slope (limited)	0.80	Very limited -percs slowly (very limited) -slope (very limited)	1.00 1.00	Very limited -percs slowly (very limited) -slope (very limited)	1.00 1.00
39:						
Susquehanna	Slightly limited -slope (slightly limited)	0.20	Very limited -percs slowly (very limited) -slope (limited)	1.00 0.78	Very limited -percs slowly (very limited) -slope (limited)	1.00 0.78
40:						
Troup	Very limited -seepage (very limited) -slope (moderately limited)	1.00 0.45	Very limited -slope (very limited) -cutbanks cave (limited	1.00 0.90	Very limited -slope (very limited) -fast intake (limited -droughty (slightly limited)	1.00 0.90 0.00
W:						
Water	Not rated		Not rated		Not rated	

Table 12b.--Water Management (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1:				
Annemaine	Moderately limited -wetness (moderately limited)	0.44	Moderately limited -wetness (moderately limited)	0.44
2:				
Atmore	Very limited -wetness (very limited) -erodes easily (moderately limited)	1.00 0.60	Very limited -wetness (very limited) -erodes easily (moderately limited)	1.00 0.60
3:				
Benndale	Not limited		Not limited	
4:				
Benndale	Moderately limited -slope (moderately limited)	0.45	Moderately limited -slope (moderately limited)	0.45
5:				
Benndale	Limited -slope (limited)	0.80	Limited -slope (limited)	0.80
6:				
Benndale	Slightly limited -slope (slightly limited)	0.20	Slightly limited -slope (slightly limited)	0.20
7:				
Escambia	Moderately limited -wetness (moderately limited)	0.44	Moderately limited -wetness (moderately limited)	0.44
8:				
Escambia	Moderately limited -wetness (moderately limited)	0.44	Moderately limited -wetness (moderately limited)	0.44
9:				
Eustis	Very limited -slope (very limited) -too sandy (moderately limited)	1.00 0.60	Very limited -slope (very limited) -droughty (moderately limited)	1.00 0.31
10:				
Eustis	Moderately limited -too sandy (moderately limited) -slope (slightly limited)	0.60 0.10	Moderately limited -droughty (moderately limited) -slope (slightly limited)	0.31 0.10

Table 12b.--Water Management (Part 2)--Continued

Map symbol and soil name	Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value
11:				
Harleston	Slightly limited -wetness (slightly limited)	0.28	Slightly limited -wetness (slightly limited)	0.28
12:				
Jena	Moderately limited -erodes easily (moderately limited)	0.60	Moderately limited -erodes easily (moderately limited)	0.60
Nugent	Moderately limited -too sandy (moderately limited)	0.60	Slightly limited -droughty (slightly limited)	0.00
13:				
Johnston	Very limited -ponded (wetness) (very limited) -wetness (very limited)	1.00 1.00	Very limited -wetness (very limited)	1.00
Croatan	Very limited -wetness (very limited)	1.00	Very limited -wetness (very limited)	1.00
14:				
Latonia	Moderately limited -too sandy (moderately limited)	0.60	Not limited	
15:				
Lucedale	Not limited		Not limited	
16:				
Lucy	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
17:				
Malbis	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
18:				
Malbis	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
19:				
Malbis	Slightly limited -slope (slightly limited)	0.20	Slightly limited -slope (slightly limited)	0.20
20:				
Mclaurin	Not limited		Not limited	
21:				
Mclaurin	Not limited		Not limited	

Table 12b.--Water Management (Part 2)--Continued

Map symbol and soil name	Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value
22:				
Mclaurin	Moderately limited -slope (moderately limited)	0.45	Moderately limited -slope (moderately limited)	0.45
23:				
Mclaurin	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
24:				
Pits	Not rated		Not rated	
Udorthents	Not rated		Not rated	
25:				
Poarch	Not limited		Not limited	
26:				
Ruston	Not limited		Not limited	
27:				
Ruston	Not limited		Not limited	
28:				
Ruston	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
29:				
Saucier	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
30:				
Saucier	Moderately limited -slope (moderately limited)	0.45	Moderately limited -slope (moderately limited)	0.45
31:				
Saucier	Slightly limited -slope (slightly limited)	0.20	Slightly limited -slope (slightly limited)	0.20
32:				
Saucier	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
Susquehanna	Slightly limited -slope (slightly limited)	0.20	Slightly limited -slope (slightly limited)	0.20
33:				
Smithdale	Limited -slope (limited)	0.99	Limited -slope (limited)	0.99
34:				
Smithdale	Very limited -slope (very limited)	1.00	Very limited -slope (very limited)	1.00

Table 12b.--Water Management (Part 2)--Continued

Map symbol and soil name	Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value
35:				
Smithton	Very limited -wetness (very limited)	1.00	Very limited -wetness (very limited)	1.00
36:				
Smithton	Very limited -wetness (very limited)	1.00	Very limited -wetness (very limited)	1.00
Harleston	Slightly limited -wetness (slightly limited)	0.28	Slightly limited -wetness (slightly limited)	0.28
37:				
Susquehanna	Slightly limited -slope (slightly limited)	0.10	Slightly limited -slope (slightly limited)	0.10
38:				
Susquehanna	Limited -slope (limited)	0.80	Limited -slope (limited)	0.80
39:				
Susquehanna	Slightly limited -slope (slightly limited)	0.20	Slightly limited -slope (slightly limited)	0.20
40:				
Troup	Moderately limited -too sandy (moderately limited)	0.60	Moderately limited -slope (moderately limited)	0.45
	-slope (moderately limited)	0.45	-droughty (slightly limited)	0.00
W:				
Water	Not rated		Not rated	

Table 13.--Engineering Properties

[Absence of an entry indicates that the data were not estimated]

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passi sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
1:									
Annemaine-------	0-11	Loam	CL-ML, ML, SC-SM, SM	A-4	0	0	95-100	89-100	74-93
	11-38	Clay, clay loam, silty clay	CL	A-6, A-7	0	0	95-100	89-100	77-100
	38-47	Clay, silty clay, silty clay loam	CH, CL, MH, ML	A-7	0	0	94-100	89-100	71-100
	47-60	Sandy clay loam, loam, clay loam	CL, SC	A-4, A-6	0	0	95-100	90-100	71-94
2:									
Atmore----------	0-16	Loam	ML	A-4	0	0	90-100	80-100	66-92
	16-50	Loam, silt loam, fine sandy loam	ML, CL-ML	A-4	0	0	83-100	66-100	54-93
	50-65	Silt loam, clay loam, silty clay loam	SM, CL, ML, SC	A-4, A-6	0	0	81-100	61-100	50-100
3:									
Benndale--------	0-6	Fine sandy loam	SM, CL-ML, ML, SC-SM	A-2-4, A-4	0	0	100	100	88-96
	6-44	Loam, sandy loam, fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	100	100	84-92
	44-74	Loam, sandy loam, sandy clay loam	ML, CL-ML, SC-SM, SM	A-4, A-6	0	0	100	100	82-96
	74-81	Loam, sandy loam, loamy sand	SM, SC-SM, CL-ML, ML	A-4, A-2	0	0	95-100	90-100	73-94
4:									
Benndale--------	0-6	Fine sandy loam	ML, CL-ML, SM, SC-SM	A-2-4, A-4	0	0	100	100	88-96
	6-43	Loam, sandy loam, fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	84-92
	43-65	Loam, sandy loam, sandy clay loam	SM, SC-SM, ML, CL-ML	A-4, A-6	0	0	100	100	82-96
	65-79	Loam, sandy loam, loamy sand	ML, CL-ML, SC-SM, SM	A-4, A-2	0	0	95-100	90-100	73-94

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
5:									
Benndale--------	0-6	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	88-96
	6-44	Loam, sandy loam, fine sandy loam	CL-ML, ML, SM, SC-SM	A-4	0	0	100	100	84-92
	44-74	Loam, sandy loam, sandy clay loam	SC-SM, SM, CL-ML, ML	A-4, A-6	0	0	100	100	82-96
	74-81	Loam, sandy loam, loamy sand	SC-SM, SM, CL-ML, ML	A-4, A-2	0	0	95-100	90-100	73-94
6:									
Benndale--------	0-11	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2-4, A-4	0	0	100	100	88-96
	11-22	Loam, sandy loam, fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	100	100	84-92
	22-42	Loam, sandy loam, sandy clay loam	CL-ML, ML, SC-SM, SM	A-4, A-6	0	0	100	100	82-96
	42-62	Loam, sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	73-94
7:									
Escambia--------	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	95-100	90-100	78-96
	8-58	Fine sandy loam, loam, silt loam	CL-ML, SC-SM, SC, CL	A-4, A-6	0	0	95-100	90-100	79-98
	58-62	Fine sandy loam, loam, silt loam	CL, SC, CL-ML, SC-SM	A-4, A-6	0	0	89-95	81-95	67-95
8:									
Escambia--------	0-8	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	90-100	78-96
	8-58	Fine sandy loam, loam, silt loam	SC-SM, CL, CL-ML, SC	A-4, A-6	0	0	95-100	90-100	79-98
	58-62	Fine sandy loam, loam, silt loam	SC-SM, SC, CL, CL-ML	A-4, A-6	0	0	89-95	81-95	67-95
9:									
Eustis----------	0-5	Loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	74-82
	5-32	Sand, fine sand, loamy fine sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	76-84
	32-42	Loamy fine sand, loamy sand	SM	A-2-4	0	0	100	100	90-98
	42-62	Sand, fine sand	SP-SM	A-2-4, A-3	0	0	100	100	75-80

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
10:									
Eustis----------	0-5	Loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	74-82
	5-32	Sand, fine sand, loamy fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	76-84
	32-42	Loamy fine sand, loamy sand	SM	A-2-4	0	0	100	100	90-98
	42-62	Sand, fine sand	SP-SM	A-2-4, A-3	0	0	100	100	75-80
11:									
Harleston-------	0-9	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	89-100	74-100	63-92
	9-60	Sandy loam, loam	SC-SM, SC, CL-ML, CL	A-2, A-4	0	0	91-100	77-100	55-82
	60-72	Sandy loam, loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	91-100	77-100	52-86
12:									
Jena------------	0-3	Loam	CL-ML, CL	A-4	0	0	100	100	82-95
	3-38	Silt loam, very fine sandy loam, loam	CL-ML, CL, SC-SM	A-2-4, A-4	0	0	100	100	89-97
	38-60	Fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4, A-4	0	0	100	100	85-10
Nugent----------	0-5	Loamy sand	SM, SP-SM	A-2	0	0	85-100	62-100	46-80
	5-60	Stratified loamy sand to fine sandy loam	SP-SM, SM	A-2	0	0	85-100	62-100	---
13:									
Johnston--------	0-55	Mucky loam	OL, ML, CL-ML	A-4, A-5, A-6, A-7-5	0	0	100	100	82-93
	55-60	Stratified loamy sand to sand	SM, SP-SM	A-2, A-3	0	0	100	100	---
Croatan---------	0-30	Muck	PT	A-8	0	0	100	100	100
	30-60	Sandy loam, fine sandy loam, mucky sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	71-83
14:									
Latonia---------	0-5	Fine sandy loam	SM	A-2-4, A-4	0	0	90-100	85-100	60-75
	5-36	Sandy loam, loam, fine sandy loam	SM	A-2-4, A-4	0	0	90-100	85-100	60-85
	36-64	Sand, loamy sand	SM, SP-SM	A-2-4	0	0	90-100	85-100	50-75

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
15:									
Lucedale--------	0-6	Loam	ML, SM	A-4, A-2	0	0	100	95-100	76-89
	6-90	Sandy clay loam, clay loam, loam	CL-ML, CL, SC, SC-SM	A-2, A-4, A-6	0	0	95-100	91-100	74-92
16:									
Lucy------------	0-28	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	93-100	69-86
	28-50	Sandy loam, fine sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6	0	0	97-100	91-100	61-87
	50-62	Sandy clay loam, clay loam, sandy clay	SC, SC-SM, SM	A-2, A-4, A-6	0	0	100	95-100	70-99
17:									
Malbis----------	0-7	Fine sandy loam	ML, SM	A-4	0	0	100	96-100	84-10
	7-20	Loam, sandy clay loam, clay loam	CL-ML, CL	A-4, A-6	0	0	98-100	93-100	77-98
	20-32	Sandy clay loam, clay loam, loam	ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	75-94
	32-60	Sandy clay loam, clay loam	CL, ML	A-4, A-5, A-6, A-7	0	0	98-100	95-100	76-94
18:									
Malbis----------	0-7	Fine sandy loam	ML, SM	A-4	0	0	100	96-100	84-10
	7-20	Loam, sandy clay loam, clay loam	CL, CL-ML	A-4, A-6	0	0	98-100	93-100	77-98
	20-32	Sandy clay loam, clay loam, loam	CL, ML	A-4, A-6, A-7	0	0	98-100	95-100	75-94
	32-60	Sandy clay loam, clay loam	ML, CL	A-4, A-5, A-6, A-7	0	0	98-100	95-100	76-94
19:									
Malbis----------	0-12	Fine sandy loam	ML, SM	A-4	0	0	100	96-100	84-10
	12-28	Loam, sandy clay loam, clay loam	CL, CL-ML	A-4, A-6	0	0	98-100	93-100	77-98
	28-62	Sandy clay loam, clay loam, loam	CL, ML	A-4, A-6, A-7	0	0	98-100	95-100	75-94
20:									
McLaurin--------	0-10	Fine sandy loam	SM	A-4	0	0	90-100	90-100	70-85
	10-38	Sandy loam, fine sandy loam, loam	SC-SM, SM, SC	A-4	0	0	90-100	81-100	59-81
	38-49	Loamy fine sand, loamy sand, sandy loam	SM	A-2, A-4	0	0	90-100	81-100	72-99
	49-60	Sandy loam, sandy clay loam, loam	SM, SC, ML, CL	A-4, A-6	0	0	90-100	81-100	54-88

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
21:									
McLaurin--------	0-10	Fine sandy loam	SM	A-4	0	0	90-100	90-100	70-85
	10-38	Sandy loam, fine sandy loam, loam	SC, SM, SC-SM	A-4	0	0	90-100	81-100	59-81
	38-49	Loamy fine sand, loamy sand, sandy loam	SM	A-2, A-4	0	0	90-100	81-100	72-99
	49-60	Sandy loam, sandy clay loam, loam	SM, SC, ML, CL	A-4, A-6	0	0	90-100	81-100	54-88
22:									
McLaurin--------	0-10	Fine sandy loam	SM	A-4	0	0	90-100	90-100	70-85
	10-38	Sandy loam, fine sandy loam, loam	SC, SC-SM, SM	A-4	0	0	90-100	81-100	59-81
	38-49	Loamy fine sand, loamy sand, sandy loam	SM	A-2, A-4	0	0	90-100	81-100	72-99
	49-60	Sandy loam, sandy clay loam, loam	CL, ML, SC, SM	A-4, A-6	0	0	90-100	81-100	54-88
23:									
McLaurin--------	0-11	Fine sandy loam	SM	A-4	0	0	90-100	81-100	72-94
	11-27	Sandy loam, fine sandy loam, loam	SM, SC-SM, SC	A-4	0	0	90-100	81-100	59-81
	27-37	Loamy fine sand, loamy sand, sandy loam	SM	A-2, A-4	0	0	90-100	81-100	72-99
	37-72	Sandy loam, sandy clay loam, loam	ML, CL, SC, SM	A-4, A-6	0	0	90-100	81-100	54-88
24:									
Pits.									
Udorthents.									
25:									
Poarch----------	0-10	Fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	95-100	90-100	78-97
	10-73	Loam, sandy loam	CL-ML, CL, ML	A-4	0	0	95-100	90-100	74-92
	73-81	Loam, fine sandy loam, sandy clay loam	CL, CL-ML, ML	A-4	0	0	86-100	73-100	59-96
26:									
Ruston----------	0-7	Fine sandy loam	CL-ML, ML, SM	A-2-4, A-4	0	0	100	85-100	71-10
	7-28	Sandy clay loam, loam, clay loam	SC, CL	A-6, A-7-6	0	0	100	86-100	67-95
	28-46	Fine sandy loam, sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	85-100	75-98
	46-65	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	86-100	64-98

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
27:									
Ruston----------	0-7	Fine sandy loam	CL-ML, ML, SM	A-2-4, A-4	0	0	100	85-100	71-10
	7-28	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	86-100	67-95
	28-46	Fine sandy loam, sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	85-100	75-98
	46-65	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	86-100	64-98
28:									
Ruston----------	0-7	Fine sandy loam	CL-ML, ML, SM	A-2-4, A-4	0	0	100	85-100	71-10
	7-28	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	86-100	67-95
	28-46	Fine sandy loam, sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	85-100	75-98
	46-65	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	86-100	64-98
29:									
Saucier---------	0-8	Fine sandy loam	SM, ML, SC-SM	A-4	0	0	91-100	77-100	67-98
	8-22	Loam, clay loam, sandy clay loam	SC-SM, CL-ML, SC, CL	A-4, A-6	0	0	84-100	65-100	53-99
	22-54	Silty clay loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7	0	0	84-100	64-100	57-10
	54-70	Clay, silty clay, clay loam	CH, CL	A-7	0	0	100	89-100	77-10
30:									
Saucier---------	0-8	Fine sandy loam	SM, ML, SC-SM	A-4	0	0	91-100	77-100	67-98
	8-22	Loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	84-100	65-100	53-99
	22-54	Silty clay loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7	0	0	84-100	64-100	57-10
	54-70	Clay, silty clay, clay loam	CH, CL	A-7	0	0	100	89-100	77-10
31:									
Saucier---------	0-8	Fine sandy loam	SM, ML, SC-SM	A-4	0	0	91-100	77-100	67-98
	8-22	Loam, clay loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	84-100	65-100	53-99
	22-54	Silty clay loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7	0	0	84-100	64-100	57-10
	54-70	Clay, silty clay, clay loam	CL, CH	A-7	0	0	100	89-100	77-10

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
32:									
Saucier---------	0-8	Fine sandy loam	ML, SC-SM, SM	A-4	0	0	91-100	77-100	67-98
	8-22	Loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	84-100	65-100	53-99
	22-54	Silty clay loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7	0	0	84-100	64-100	57-10
	54-70	Clay, silty clay, clay loam	CH, CL	A-7	0	0	100	89-100	77-10
Susquehanna-----	0-8	Silt loam	ML, SM	A-4	0	0	100	100	86-96
	8-61	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	80-10
33:									
Smithdale-------	0-11	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	85-100	72-98
	11-38	Clay loam, sandy clay loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	85-100	71-98
	38-80	Loam, sandy loam	CL, ML, SC, SM	A-4	0	0	100	85-100	69-96
34:									
Smithdale-------	0-11	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	85-100	72-98
	11-38	Clay loam, sandy clay loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	85-100	71-98
	38-80	Loam, sandy loam	SC, SM, CL, ML	A-4	0	0	100	85-100	69-96
35:									
Smithton--------	0-14	Fine sandy loam	SM, SC-SM	A-4, A-2	0	0	95-100	90-100	77-98
	14-48	Fine sandy loam, sandy loam, loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	95-100	90-100	77-98
	48-62	Sandy loam, loam, sandy clay loam	SC, CL-ML, CL, SC-SM	A-2, A-4, A-6	0	0	95-100	90-100	76-10
36:									
Smithton--------	0-14	Fine sandy loam	SC-SM, SM	A-4, A-2	0	0	95-100	90-100	77-98
	14-48	Fine sandy loam, sandy loam, loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	77-98
	48-62	Sandy loam, loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	95-100	90-100	76-10

Table 13.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
36:									
Harleston-------	0-9	Fine sandy loam	SM, SC-SM, CL-ML, ML	A-2, A-4	0	0	89-100	74-100	63-92
	9-60	Sandy loam, loam	CL, SC-SM, SC, CL-ML	A-2, A-4	0	0	91-100	77-100	55-82
	60-72	Sandy loam, loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	91-100	77-100	52-86
37:									
Susquehanna-----	0-8	Silt loam	SM, ML	A-4	0	0	100	100	86-96
	8-61	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	80-10
38:									
Susquehanna-----	0-8	Silt loam	SM, ML	A-4	0	0	100	100	86-96
	8-61	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	80-10
39:									
Susquehanna-----	0-8	Silt loam	ML, SM	A-4	0	0	100	100	86-96
	8-61	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	80-10
40:									
Troup-----------	0-66	Loamy sand	SM, SP-SM	A-2, A-4	0	0	95-100	85-100	64-85
	66-70	Sandy clay loam, sandy loam, fine sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	95-100	85-100	65-97
W:									
Water.									

Table 14.--Physical Soil Properties

[Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
1:												
Annemaine---	0-11	10-20	1.30-1.55	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.28	.28	5	5	48
	11-38	35-50	1.30-1.45	0.06-0.2	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
	38-47	35-60	1.25-1.40	0.06-0.2	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
	47-60	20-35	1.30-1.60	0.2-0.6	0.14-0.18	0.0-2.9	0.0-0.2	.37	.37			
2:												
Atmore------	0-16	2-12	1.35-1.60	0.6-2	0.16-0.24	0.0-2.9	0.5-3.0	.37	.37	5	5	48
	16-50	6-18	1.35-1.60	0.6-2	0.16-0.24	0.0-2.9	0.1-0.5	.37	.37			
	50-65	15-40	1.45-1.65	0.2-0.6	0.18-0.22	0.0-2.9	0.1-0.3	.32	.32			
3:												
Benndale----	0-6	6-14	1.45-1.55	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	6-44	10-18	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
	44-74	14-28	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.2	.32	.32			
	74-81	6-20	1.55-1.65	2-6	0.10-0.15	0.0-2.9	0.1-0.2	.28	.28			
4:												
Benndale----	0-6	6-14	1.45-1.55	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	6-43	10-18	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
	43-65	14-28	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.2	.32	.32			
	65-79	6-20	1.55-1.65	2-6	0.10-0.15	0.0-2.9	0.1-0.2	.28	.28			
5:												
Benndale----	0-6	6-14	1.45-1.55	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	6-44	10-18	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
	44-74	14-28	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.2	.32	.32			
	74-81	6-20	1.55-1.65	2-6	0.10-0.15	0.0-2.9	0.1-0.2	.28	.28			
6:												
Benndale----	0-11	6-14	1.45-1.55	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	11-22	10-18	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	22-42	14-28	1.55-1.65	0.6-2	0.12-0.18	0.0-2.9	0.1-0.3	.32	.32			
	42-62	6-20	1.55-1.65	2-6	0.10-0.15	0.0-2.9	0.0-0.2	.28	.28			
7:												
Escambia----	0-8	5-14	1.35-1.55	2-6	0.11-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	8-58	8-18	1.35-1.55	0.6-2	0.15-0.20	0.0-2.9	0.1-0.6	.24	.24			
	58-62	8-35	1.45-1.65	0.06-0.6	0.10-0.18	0.0-2.9	0.1-0.2	.28	.28			
8:												
Escambia----	0-8	5-14	1.35-1.55	2-6	0.11-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	8-58	8-18	1.35-1.55	0.6-2	0.15-0.20	0.0-2.9	0.1-0.6	.24	.24			
	58-62	8-35	1.45-1.65	0.06-0.6	0.10-0.18	0.0-2.9	0.1-0.2	.28	.28			
9:												
Eustis------	0-5	2-10	1.35-1.60	6-20	0.08-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	5-32	2-10	1.40-1.60	6-20	0.05-0.08	0.0-2.9	0.1-0.3	.17	.17			
	32-42	6-14	1.40-1.60	6-20	0.07-0.11	0.0-2.9	0.1-0.2	.17	.17			
	42-62	2-7	1.45-1.60	6-20	0.05-0.07	0.0-2.9	0.1-0.2	.17	.17			
10:												
Eustis------	0-5	2-10	1.35-1.60	6-20	0.08-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	12-32	2-10	1.40-1.60	6-20	0.05-0.08	0.0-2.9	0.1-0.3	.17	.17			
	32-42	6-14	1.40-1.60	6-20	0.07-0.11	0.0-2.9	0.1-0.2	.17	.17			
	42-62	2-7	1.45-1.60	6-20	0.05-0.07	0.0-2.9	0.1-0.2	.17	.17			

Table 14.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
11:												
Harleston---	0-9	2-8	1.25-1.35	0.6-6	0.08-0.16	0.0-2.9	2.0-5.0	.20	.20	5	3	86
	9-60	8-18	1.55-1.65	0.6-2	0.13-0.16	0.0-2.9	0.1-0.3	.32	.32			
	60-72	8-27	1.55-1.65	0.6-2	0.13-0.16	0.0-2.9	0.1-0.2	.32	.32			
12:												
Jena--------	0-3	14-27	1.30-1.70	0.6-2	0.12-0.20	0.0-2.9	0.5-2.0	.37	.37	5	5	48
	3-38	10-18	1.30-1.70	0.6-2	0.10-0.20	0.0-2.9	0.5-1.0	.28	.28			
	38-60	5-20	1.35-1.65	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.24	.24			
Nugent------	0-5	2-8	1.20-1.40	6-20	0.07-0.10	0.0-2.9	0.5-2.0	.10	.10	5	1	180
	5-60	2-10	1.20-1.40	2-6	0.07-0.13	0.0-2.9	0.1-0.8	.17	.20			
13:												
Johnston----	0-55	7-18	1.25-1.45	2-6	0.20-0.26	0.0-2.9	8.0-18	.17	.17	5	5	56
	55-60	2-12	1.55-1.65	6-20	0.02-0.07	0.0-2.9	1.0-3.0	.17	.17			
Croatan-----	0-30	0-0	0.40-0.65	0.06-6	0.35-0.45	---	25-60	---	---	5	2	134
	30-60	8-20	1.40-1.60	0.2-6	0.10-0.15	0.0-2.9	1.0-3.0	.17	.17			
14:												
Latonia-----	0-5	10-20	1.40-1.50	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	5-36	10-16	1.40-1.50	2-6	0.10-0.15	0.0-2.9	0.1-0.5	.20	.20			
	36-64	3-10	1.40-1.50	6-20	0.05-0.10	0.0-2.9	0.1-0.2	.17	.17			
15:												
Lucedale----	0-6	1-10	1.40-1.55	0.6-2	0.15-0.20	0.0-2.9	0.5-2.0	.24	.24	5	5	48
	6-90	20-30	1.55-1.70	0.6-2	0.14-0.18	0.0-2.9	0.1-0.4	.24	.24			
16:												
Lucy--------	0-28	1-12	1.30-1.70	6-20	0.08-0.12	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	28-50	10-30	1.40-1.60	2-6	0.10-0.12	0.0-2.9	0.1-0.3	.24	.24			
	50-62	20-45	1.40-1.60	0.6-2	0.12-0.14	0.0-2.9	0.0-0.2	.28	.28			
17:												
Malbis------	0-7	10-25	1.30-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	7-20	18-33	1.30-1.70	0.6-2	0.12-0.20	0.0-2.9	0.1-0.3	.28	.28			
	20-32	20-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	0.1-0.2	.28	.28			
	32-60	20-35	1.45-1.70	0.2-0.6	0.06-0.12	0.0-2.9	0.1-0.2	.28	.28			
18:												
Malbis------	0-7	10-25	1.30-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	7-20	18-33	1.30-1.70	0.6-2	0.12-0.20	0.0-2.9	0.1-0.3	.28	.28			
	20-32	20-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	0.1-0.2	.28	.28			
	32-60	20-35	1.45-1.70	0.2-0.6	0.06-0.12	0.0-2.9	0.1-0.2	.28	.28			
19:												
Malbis------	0-12	10-25	1.30-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	12-28	18-33	1.30-1.70	0.6-2	0.12-0.20	0.0-2.9	0.1-0.3	.28	.28			
	28-62	20-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	0.1-0.2	.28	.28			
20:												
McLaurin----	0-10	5-10	1.40-1.60	0.6-2	0.12-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	10-38	10-18	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.3	.20	.20			
	38-49	5-15	1.30-1.70	2-6	0.05-0.10	0.0-2.9	0.1-0.2	.20	.20			
	49-60	5-27	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.2	.20	.20			
21:												
McLaurin----	0-10	5-10	1.40-1.60	0.6-2	0.12-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	10-38	10-18	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.3	.20	.20			
	38-49	5-15	1.30-1.70	2-6	0.05-0.10	0.0-2.9	0.1-0.2	.20	.20			
	49-60	5-27	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.2	.20	.20			

Table 14.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
22:												
McLaurin----	0-10	5-10	1.40-1.60	0.6-2	0.12-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	10-38	10-18	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.3	.20	.20			
	38-49	5-15	1.30-1.70	2-6	0.05-0.10	0.0-2.9	0.1-0.2	.20	.20			
	49-60	5-27	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.2	.20	.20			
23:												
McLaurin----	0-11	5-10	1.40-1.60	0.6-2	0.12-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	11-27	10-18	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.1-0.3	.20	.20			
	27-37	5-15	1.30-1.70	2-6	0.05-0.10	0.0-2.9	0.1-0.3	.20	.20			
	37-72	5-27	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.20	.20			
24:												
Pits--------	0-60	---	---	---	---	---	---	---	---	-	8	0
Udorthents.												
25:												
Poarch------	0-10	5-15	1.35-1.55	2-6	0.10-0.15	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	10-73	8-18	1.35-1.55	0.6-2	0.10-0.20	0.0-2.9	0.1-0.3	.24	.24			
	73-81	10-25	1.45-1.65	0.2-0.6	0.10-0.20	0.0-2.9	0.1-0.2	.24	.24			
26:												
Ruston------	0-7	2-20	1.30-1.70	0.6-2	0.09-0.16	0.0-2.9	0.5-3.0	.28	.28	5	3	86
	7-28	18-35	1.40-1.70	0.6-2	0.12-0.17	0.0-2.9	0.1-0.3	.28	.28			
	28-46	10-20	1.30-1.70	0.6-2	0.12-0.15	0.0-2.9	0.1-0.2	.28	.32			
	46-65	15-38	1.40-1.70	0.6-2	0.12-0.17	0.0-2.9	0.1-0.2	.28	.28			
27:												
Ruston------	0-7	2-20	1.30-1.70	0.6-2	0.09-0.16	0.0-2.9	0.5-3.0	.28	.28	5	3	86
	7-28	18-35	1.40-1.70	0.6-2	0.12-0.17	0.0-2.9	0.1-0.3	.28	.28			
	28-46	10-20	1.30-1.70	0.6-2	0.12-0.15	0.0-2.9	0.1-0.2	.28	.32			
	46-65	15-38	1.40-1.70	0.6-2	0.12-0.17	0.0-2.9	0.1-0.2	.28	.28			
28:												
Ruston------	0-7	2-20	1.30-1.70	0.6-2	0.09-0.16	0.0-2.9	0.5-3.0	.28	.28	5	3	86
	7-28	18-35	1.40-1.70	0.6-2	0.12-0.17	0.0-2.9	0.1-0.3	.28	.28			
	28-46	10-20	1.30-1.70	0.6-2	0.12-0.15	0.0-2.9	0.1-0.2	.28	.32			
	46-65	15-38	1.40-1.70	0.6-2	0.12-0.17	0.0-2.9	0.1-0.2	.28	.28			
29:												
Saucier-----	0-8	8-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	8-22	18-35	1.55-1.60	0.6-2	0.16-0.19	0.0-2.9	0.1-0.3	.32	.37			
	22-54	18-38	1.55-1.60	0.06-0.2	0.16-0.20	0.0-2.9	0.1-0.2	.32	.37			
	54-70	35-50	1.35-1.45	0.06-0.2	0.16-0.20	3.0-5.9	0.1-0.2	.32	.32			
30:												
Saucier-----	0-8	8-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	8-22	18-35	1.55-1.60	0.6-2	0.16-0.19	0.0-2.9	0.1-0.3	.32	.37			
	22-54	18-38	1.55-1.60	0.06-0.2	0.16-0.20	0.0-2.9	0.1-0.2	.32	.37			
	54-70	35-50	1.35-1.45	0.06-0.2	0.16-0.20	3.0-5.9	0.1-0.2	.32	.32			
31:												
Saucier-----	0-8	8-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-22	18-35	1.55-1.60	0.6-2	0.16-0.19	0.0-2.9	0.1-0.3	.32	.37			
	22-54	18-38	1.55-1.60	0.06-0.2	0.16-0.20	0.0-2.9	0.1-0.2	.32	.37			
	54-70	35-50	1.35-1.45	0.06-0.2	0.16-0.20	3.0-5.9	0.1-0.2	.32	.32			

Table 14.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
32:												
Saucier-----	0-8	8-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-22	18-35	1.55-1.60	0.6-2	0.16-0.19	0.0-2.9	0.1-0.3	.32	.37			
	22-54	18-38	1.55-1.60	0.06-0.2	0.16-0.20	0.0-2.9	0.1-0.2	.32	.37			
	54-70	35-50	1.35-1.45	0.06-0.2	0.16-0.20	3.0-5.9	0.1-0.2	.32	.32			
Susquehanna-	0-8	2-12	1.50-1.55	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	8-61	35-60	1.25-1.50	0.00-0.06	0.15-0.20	6.0-8.9	0.1-0.2	.32	.32			
33:												
Smithdale---	0-11	2-15	1.40-1.50	2-6	0.14-0.16	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	11-38	18-33	1.40-1.55	0.6-2	0.15-0.17	0.0-2.9	0.1-0.3	.24	.24			
	38-80	12-27	1.40-1.55	2-6	0.14-0.16	0.0-2.9	0.1-0.2	.28	.28			
34:												
Smithdale---	0-11	2-15	1.40-1.50	2-6	0.14-0.16	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	11-38	18-33	1.40-1.55	0.6-2	0.15-0.17	0.0-2.9	0.1-0.3	.24	.24			
	38-80	12-27	1.40-1.55	2-6	0.14-0.16	0.0-2.9	0.1-0.2	.28	.28			
35:												
Smithton----	0-14	5-18	1.40-1.55	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	14-48	5-18	1.40-1.55	0.6-2	0.10-0.20	0.0-2.9	0.1-0.8	.32	.32			
	48-62	8-30	1.35-1.55	0.2-0.6	0.11-0.20	0.0-2.9	0.1-0.5	.37	.37			
36:												
Smithton----	0-14	5-18	1.40-1.55	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	14-48	5-18	1.40-1.55	0.6-2	0.10-0.20	0.0-2.9	0.1-0.8	.32	.32			
	48-62	8-30	1.35-1.55	0.2-0.6	0.11-0.20	0.0-2.9	0.1-0.5	.37	.37			
Harleston---	0-9	2-8	1.25-1.35	0.6-6	0.08-0.16	0.0-2.9	2.0-5.0	.20	.20	5	3	86
	9-60	8-18	1.55-1.65	0.6-2	0.13-0.16	0.0-2.9	0.1-0.3	.32	.32			
	60-72	8-27	1.55-1.65	0.6-2	0.13-0.16	0.0-2.9	0.1-0.2	.32	.32			
37:												
Susquehanna-	0-8	2-12	1.50-1.55	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	5	48
	8-61	35-60	1.25-1.50	0.00-0.06	0.15-0.20	6.0-8.9	0.1-0.2	.32	.32			
38:												
Susquehanna-	0-8	2-12	1.50-1.55	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	5	48
	8-61	35-60	1.25-1.50	0.00-0.06	0.15-0.20	6.0-8.9	0.1-0.2	.32	.32			
39:												
Susquehanna-	0-8	2-12	1.50-1.55	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	8-61	35-60	1.25-1.50	0.00-0.06	0.15-0.20	6.0-8.9	0.1-0.2	.32	.32			
40:												
Troup-------	0-66	2-12	1.30-1.70	6-20	0.08-0.12	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	66-70	15-35	1.40-1.60	0.6-2	0.10-0.13	0.0-2.9	0.1-0.3	.20	.20			
W:												
Water.												

Table 15.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Subsidence		Risk of corrosion	
	Initial	Total	Uncoated steel	Concrete
	In	*In*		
1: Annemaine	---	---	High	High
2: Atmore	---	---	High	High
3: Benndale	---	---	Low	Moderate
4: Benndale	---	---	Low	Moderate
5: Benndale	---	---	Low	Moderate
6: Benndale	---	---	Low	Moderate
7: Escambia	---	---	Moderate	High
8: Escambia	---	---	Moderate	High
9: Eustis	---	---	Low	High
10: Eustis	---	---	Low	High
11: Harleston	---	---	Moderate	High
12: Jena	---	---	Low	High
Nugent	---	---	Low	Moderate
13: Johnston	---	---	High	High
Croatan	4-10	18-24	High	High
14: Latonia	---	---	Low	Moderate
15: Lucedale	---	---	Moderate	Moderate
16: Lucy	---	---	Low	High
17: Malbis	---	---	Moderate	Moderate
18: Malbis	---	---	Moderate	Moderate

Table 15.--Soil Features--Continued

Map symbol and soil name	Subsidence		Risk of corrosion	
	Initial	Total	Uncoated steel	Concrete
	In	*In*		
19: Malbis	---	---	Moderate	Moderate
20: McLaurin	---	---	Low	Moderate
21: McLaurin	---	---	Low	Moderate
22: McLaurin	---	---	Low	Moderate
23: McLaurin	---	---	Low	Moderate
24: Pits. Udorthents.				
25: Poarch	---	---	Low	High
26: Ruston	---	---	Moderate	Moderate
27: Ruston	---	---	Moderate	Moderate
28: Ruston	---	---	Moderate	Moderate
29: Saucier	---	---	Moderate	High
30: Saucier	---	---	Moderate	High
31: Saucier	---	---	Moderate	High
32: Saucier	---	---	Moderate	High
Susquehanna	---	---	High	High
33: Smithdale	---	---	Low	Moderate
34: Smithdale	---	---	Low	Moderate
35: Smithton	---	---	High	High
36: Smithton	---	---	High	High
Harleston	---	---	Moderate	High
37: Susquehanna	---	---	High	High

Table 15.--Soil Features--Continued

Map symbol and soil name	Subsidence		Risk of corrosion	
	Initial	Total	Uncoated steel	Concrete
	In	*In*		
38:				
Susquehanna	---	---	High	High
39:				
Susquehanna	---	---	High	High
40:				
Troup	---	---	Low	Moderate
W:				
Water.				

Table 16.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates
ponding and flooding apply to the whole year rather than to individual months. Absence of
that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydrologic group	Month	Water Table		Ponding			
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	D
			Ft	*Ft*	*Ft*			
1:								
Annemaine	C							
		Jan-Mar	1.5-2.5	>6.0	---	---	None	Ve
		Apr-Dec	---	---	---	---	None	
2:								
Atmore	B/D							
		Jan-Mar	0.0-1.0	0.0-1.0	---	---	None	
		Apr-Sep	---	---	---	---	None	
		Oct-Dec	0.0-1.0	0.0-1.0	---	---	None	
3:								
Benndale	B							
		Jan-Dec	---	---	---	---	None	
4:								
Benndale	B							
		Jan-Dec	---	---	---	---	None	
5:								
Benndale	B							
		Jan-Dec	---	---	---	---	None	
6:								
Benndale	B							
		Jan-Dec	---	---	---	---	None	
7:								
Escambia	C							
		Jan-Mar	1.5-2.5	>6.0	---	---	None	
		Apr-Nov	---	---	---	---	None	
		December	1.5-2.5	>6.0	---	---	None	
8:								
Escambia	C							
		Jan-Mar	1.5-2.5	>6.0	---	---	None	
		Apr-Nov	---	---	---	---	None	
		December	1.5-2.5	>6.0	---	---	None	

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water Table		Ponding			
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	D
			Ft	*Ft*	*Ft*			
9:								
Eustis	A							
		Jan-Dec	---	---	---	---	None	
10:								
Eustis	A							
		Jan-Dec	---	---	---	---	None	
11:								
Harleston	C							
		Jan-Mar	2.0-3.0	>6.0	---	---	None	Ve
		April	---	---	---	---	None	Ve
		May-Oct	---	---	---	---	None	
		November	2.0-3.0	>6.0	---	---	None	
		December	2.0-3.0	>6.0	---	---	None	
12:								
Jena	B							
		Jan-Apr	---	---	---	---	None	Ve
		May-Nov	---	---	---	---	None	
		December	---	---	---	---	None	Ve
Nugent	A							
		Jan-Apr	3.5-6.0	>6.0	---	---	None	
		May-Nov	---	---	---	---	None	
		December	---	---	---	---	None	
13:								
Johnston	D							
		Jan-June	0.0	>6.0	0.0-1.0	Long	Frequent	
		July	---	---	0.0-1.0	Long	Frequent	
		Aug-Oct	---	---	---	---	---	
		Nov-Dec	0.0	>6.0	0.0-1.0	Long	Frequent	
Croatan	D							
		January	0.0	0.0-1.0	---	---	None	
		Feb-May	0.0-1.0	>6.0	---	---	None	
		June-Oct	---	---	---	---	None	
		Nov-Dec	0.0-1.0	>6.0	---	---	None	
14:								
Latonia	B							
		Jan-Apr	---	---	---	---	None	Ve
		May-Oct	---	---	---	---	None	
		Nov-Dec	---	---	---	---	None	Ve

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water Table		Ponding			D
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	
			Ft	*Ft*	*Ft*			
15:								
Lucedale	B							
		Jan-Dec	---	---	---	---	None	
16:								
Lucy	A							
		Jan-Dec	---	---	---	---	None	
17:								
Malbis	B							
		Jan-Mar	2.5-3.5	3.0-4.0	---	---	None	
		Apr-Nov	---	---	---	---	None	
		December	2.5-3.5	3.0-4.0	---	---	None	
18:								
Malbis	B							
		Jan-Mar	2.5-3.5	3.0-4.0	---	---	None	
		Apr-Nov	---	---	---	---	None	
		December	2.5-3.5	3.0-4.0	---	---	None	
19:								
Malbis	B							
		Jan-Mar	2.5-4.0	2.5-4.0	---	---	None	
		Apr-Nov	---	---	---	---	None	
		December	2.5-4.0	2.5-4.0	---	---	None	
20:								
McLaurin	B							
		Jan-Dec	---	---	---	---	None	
21:								
McLaurin	B							
		Jan-Dec	---	---	---	---	None	
22:								
McLaurin	B							
		Jan-Dec	---	---	---	---	None	
23:								
McLaurin	B							
		Jan-Dec	---	---	---	---	None	
24:								
Pits	---							
		Jan-Dec	---	---	---	---	None	

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water Table		Ponding			D
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	
			Ft	*Ft*	*Ft*			
24:								
Udorthents	---							
		Jan-Dec	---	---	---	---	None	
25:								
Poarch	B							
		Jan-Mar	2.5-5.0	>6.0	---	---	None	
		Apr-Nov	---	---	---	---	None	
		December	2.5-5.0	>6.0	---	---	None	
26:								
Ruston	B							
		Jan-Dec	---	---	---	---	None	
27:								
Ruston	B							
		Jan-Dec	---	---	---	---	None	
28:								
Ruston	B							
		Jan-Dec	---	---	---	---	None	
29:								
Saucier	C							
		Jan-Mar	2.5-4.0	2.5-4.0	---	---	None	
		Apr-Dec	---	---	---	---	None	
30:								
Saucier	C							
		Jan-Mar	2.5-4.0	2.5-4.0	---	---	None	
		Apr-Dec	---	---	---	---	None	
31:								
Saucier	C							
		Jan-Mar	2.5-4.0	2.5-4.0	---	---	None	
		Apr-Dec	---	---	---	---	None	
32:								
Saucier	C							
		Jan-Mar	2.5-4.0	2.5-4.0	---	---	None	
		Apr-Dec	---	---	---	---	None	
Susquehanna	D							
		Jan-Dec	---	---	---	---	None	

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water Table		Ponding			D
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	
			Ft	*Ft*	*Ft*			
33:								
Smithdale	B							
		Jan-Dec	---	---	---	---	None	
34:								
Smithdale	B							
		Jan-Dec	---	---	---	---	None	
35:								
Smithton	D							
		Jan-May	0.0-1.0	0.0-1.0	---	---	None	Ve
		June-Nov	---	---	---	---	None	
		December	0.0-1.0	0.0-1.0	---	---	None	Ve
36:								
Smithton	D							
		Jan-May	0.0-1.0	0.0-1.0	---	---	None	Ve
		June-Nov	---	---	---	---	None	
		December	0.0-1.0	0.0-1.0	---	---	None	
Harleston	C							
		Jan-Mar	2.0-3.0	>6.0	---	---	None	Ve
		Apr-May	---	---	---	---	None	Ve
		June-Oct	---	---	---	---	None	
		November	2.0-3.0	>6.0	---	---	None	
		December	2.0-3.0	>6.0	---	---	None	Ve
37:								
Susquehanna	D							
		Jan-Dec	---	---	---	---	None	
38:								
Susquehanna	D							
		Jan-Dec	---	---	---	---	None	
39:								
Susquehanna	D							
		Jan-Dec	---	---	---	---	None	
40:								
Troup	A							
		Jan-Dec	---	---	---	---	None	
W:								
Water.								

Table 17.--Taxonomic Classification of the Soils

[An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series]

Soil name	Family or higher taxonomic class
Annemaine	Fine, mixed, semiactive, thermic Aquic Hapludults
Atmore	Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleaquults
Benndale	Coarse-loamy, siliceous, semiactive, thermic Typic Paleudults
Croatan	Loamy, siliceous, dysic, thermic Terric Halosaprists
Escambia	Coarse-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults
Eustis	Siliceous, thermic Psammentic Paleudults
Harleston	Coarse-loamy, siliceous, semiactive, thermic Aquic Paleudults
Jena	Coarse-loamy, siliceous, active, thermic Fluventic Dystrudepts
Johnston	Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts
Latonia	Coarse-loamy, siliceous, semiactive, thermic Typic Hapludults
Lucedale	Fine-loamy, siliceous, subactive, thermic Rhodic Paleudults
*Lucy	Loamy, kaolinitic, thermic Arenic Kandiudults
Malbis	Fine-loamy, siliceous, subactive, thermic Plinthic Paleudults
McLaurin	Coarse-loamy, siliceous, subactive, thermic Typic Paleudults
Nugent	Sandy, siliceous, thermic Typic Udifluvents
Poarch	Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleudults
Ruston	Fine-loamy, siliceous, semiactive, thermic Typic Paleudults
Saucier	Fine-loamy, siliceous, subactive, thermic Plinthaquic Paleudults
Smithdale	Fine-loamy, siliceous, subactive, thermic Typic Hapludults
Smithton	Coarse-loamy, siliceous, semiactive, thermic Typic Paleaquults
Susquehanna	Fine, smectitic, thermic Vertic Paleudalfs
*Troup	Loamy, kaolinitic, thermic Grossarenic Kandiudults

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